

# Shape and space resources: 2D and 3D shapes

## Main Curriculum Elements

### Functional Mathematics

Entry Level 1 – recognise and name common 2D and 3D shapes

Entry Level 2 - know properties of simple 2D and 3D shapes

Entry Level 3 - recognise and name simple 2D and 3D shapes and their properties

Level 1 - Construct geometric diagrams, models and shapes

Level 2 - Recognise and use 2D representations of 3D objects

### MSS2/E1.1 Recognise and name simple 2D and 3D shapes

- (a) know the names of common 2D shapes e.g. rectangle, square, circle
- (b) know the names of common 3D shapes e.g. cube
- (c) understand that shape is independent of size
- (d) understand that shape is independent of orientation (i.e. shape is not fixed in space) and recognise shapes in different orientations
- (e) understand the difference between 2d e.g. flat and 3D (e.g. solid, or a container) shapes

### MSS2/E2.1 Recognise and name common 2-D and 3-D shapes

- (a) know the names of 2-D common shapes, e.g. rectangle, square, circle, triangle
- (b) know the names of 3-D common shapes, e.g. pyramid, cylinder
- (c) understand that shape is independent of size, proportion and orientation e.g. a cylinder can be flat like a table mat or tall like a tin of baked beans (amended in 2009 update)

### MSS2/E2.2 Describe the properties of common 2-D and 3-D shapes

- (a) Know the relevant vocabulary for describing 2-D and 3-D shapes, e.g. corner, angle, face, side This sub-element amended in the 2009 curriculum update

### MSS2/E3.1 sort 2-D and 3-D shapes to solve practical problems using properties (e.g. lines of symmetry, side length, angles)

- (a) Recognise and name common regular polygons New sub-element added in the 2009 curriculum update
- (b) Identify lines of symmetry New sub-element added in the 2009 curriculum update
- (c) Identify right angles in 2-D shapes and in the environment New sub-element added in the 2009 curriculum update

### MSS2/L1.2 draw 2-D shapes in different orientations using grids (e.g. in diagrams or plans)

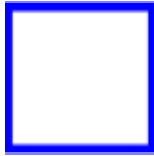
- (a) recognise and name a range of mathematical 2-D and 3-D shapes This new sub-element added in the 2009 curriculum update
- (b) know the properties of regular 2-D shapes

### MSS2/L2.1 Recognise and name a range of mathematical 2-D representations of 3-D objects, e.g. in maps and plans

- (a) Know the accepted conventions for representing 3-D objects, e.g. contour lines, representation of a cuboid.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 2 Dimensional (2D) Shapes



**square**

4 sides, all the same length



**circle**

completely round



**rectangle**

4 sides



**oval**

rounded, but flatter than a circle.



**triangle**

3 sides

### E1-2

Information sheet or cut up and use as a matching game (column 3 can be omitted for Entry 1)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 2 Dimensional (2D) Shapes

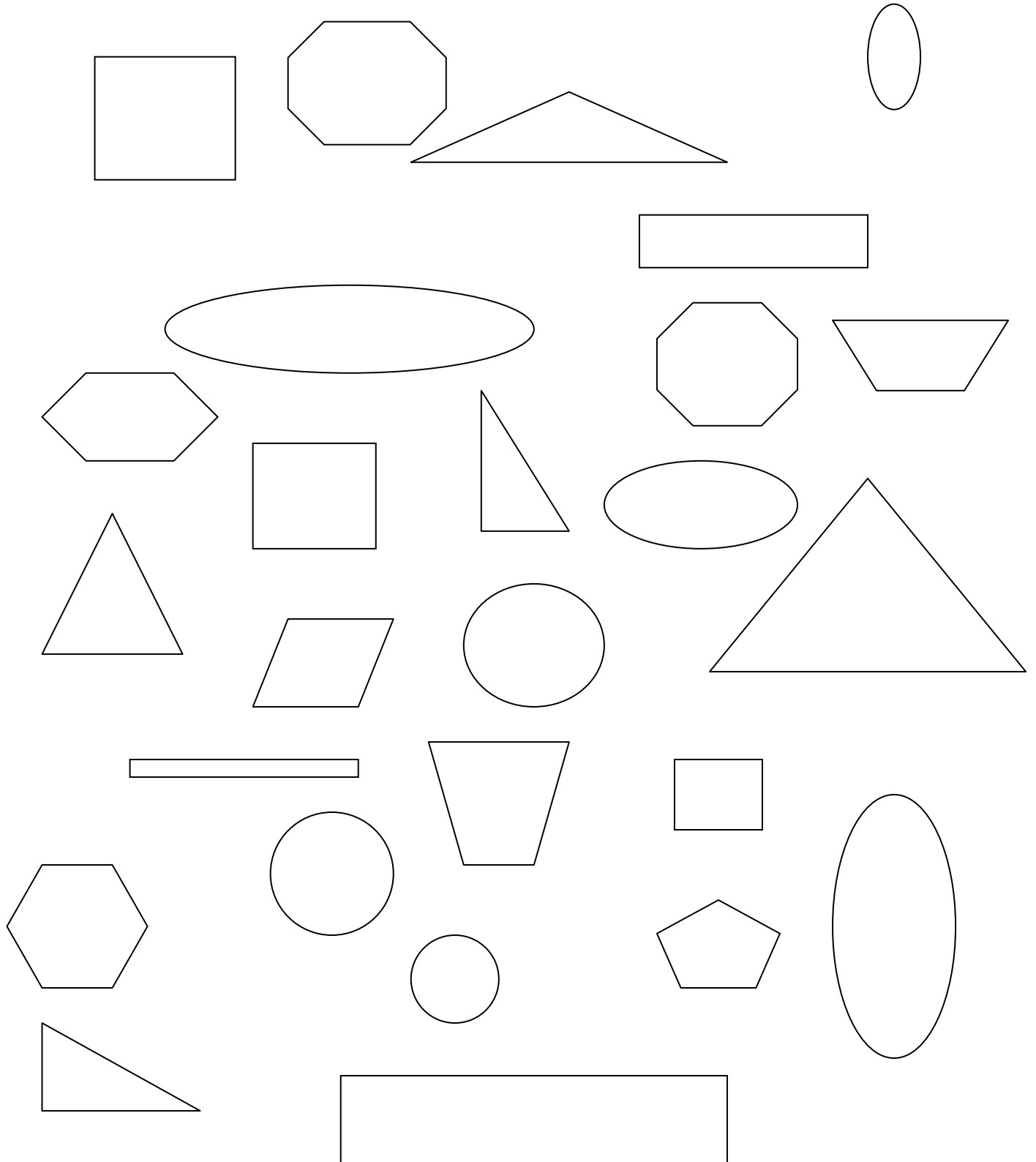
Complete the table

<b>Shape</b>	<b>Number of sides</b>	<b>Number of corners</b>
<b>square</b>	4	4
<b>circle</b>		
<b>rectangle</b>		
<b>oval</b>		0
<b>triangle</b>		

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 2 Dimensional Shapes

Write the name inside each of the shapes below.



**E1-E3**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 2 Dimensional (2D) Shapes



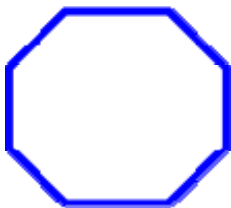
**regular  
pentagon**

5 sides



**regular  
hexagon**

6 sides



**regular  
octagon**

8 sides



**parallelogram**

4 sides –  
opposite sides  
are parallel



**trapezium:**

4 sides with  
only one pair of  
sides parallel

**E3**

Information sheet or cut up and use as a matching game

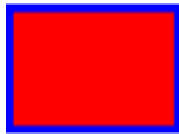
Kindly contributed by John Thompson, Wigan and Leigh College. Search for John on [www.skillsworkshop.org](http://www.skillsworkshop.org)

August 2009 (updated Aug 2011). MSS2/E1.1 E2.1 E2.2 E3.1 L1.2 L2.1 and E1-L2 Functional Maths (see p1 for details). Page 5 of 12

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## Drawing 2 Dimensional (2D) shapes

Using the drawing package in Microsoft Word (auto-shapes), draw the following shapes with specific measurements.



**red  
square**

each side to  
measure 5cm



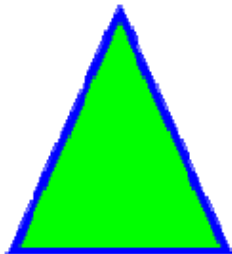
**yellow  
rectangle**

the longer sides to  
measure 10cm, the  
shorter sides to  
measure 7cm.



**pink  
triangle**

: each side to  
measure 4cm

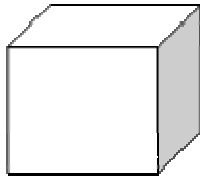


**green  
triangle**

:2 sides to measure  
6cm, 1 side to  
measure 4cm

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 3 Dimensional (3D) Shapes



**cube**

6 faces – all are squares



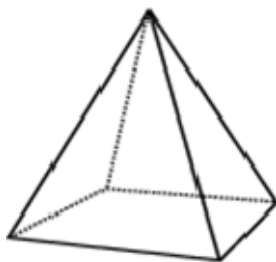
**cuboid**

6 faces that are squares or rectangles



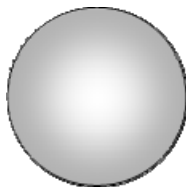
**cylinder**

2 flat faces are both circles  
one curved face



**pyramid**

1 square face  
and 4 triangular faces



**sphere**

1 curved face

### E1-3

Information sheet or cut up and use as a matching game (column 3 can be omitted for Entry 1)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### 3 Dimensional (3D) Shapes

Complete the table.

Shape	Number of edges	Number of corners	Number of faces
cube	12		6
cuboid		8	
cylinder			
square based pyramid			
sphere			1
cone			

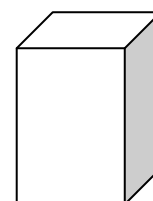
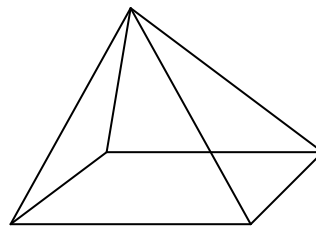
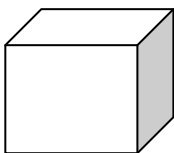
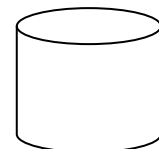
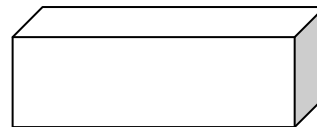
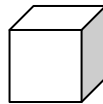
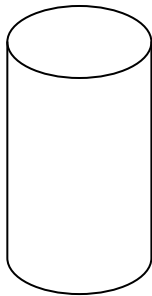
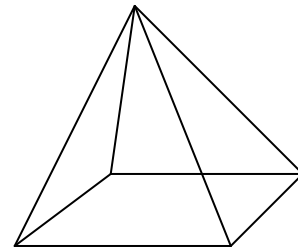
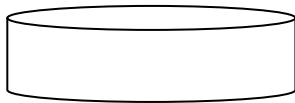
**E3-L2**



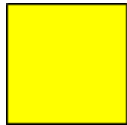




Name: \_\_\_\_\_ Date: \_\_\_\_\_

## 3 Dimensional (3D) Shapes



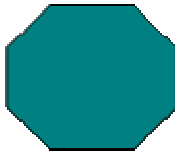


Write the name inside each of the shapes below.



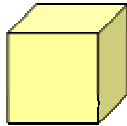
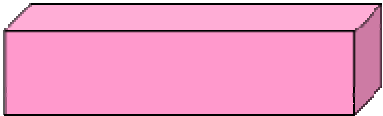
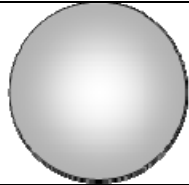
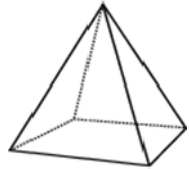
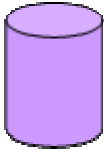
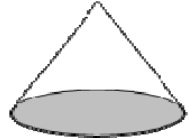
Name: \_\_\_\_\_ Date: \_\_\_\_\_

<p>I have 4 sides that are all the same length and 4 corners. I am flat. What shape am I?</p>		<p><b>Square</b></p>
<p>I am a flat shape with no sides and no corners. What shape am I?</p>		<p><b>Circle</b></p>
<p>I have 4 sides. 2 sides are long and 2 sides are short. I am flat. What shape am I?</p>		<p><b>Rectangle</b></p>
<p>I am a flat shape and look like an egg. What shape am I?</p>		<p><b>Oval</b></p>
<p>I have 3 sides and 3 corners. I look like the end of a Toblerone box. What shape am I?</p>		<p><b>Triangle</b></p>

Name: \_\_\_\_\_ Date: \_\_\_\_\_

<p>I have 5 sides and I am flat. There is a building in America that shares my name. What shape am I?</p>		<p><b>Pentagon</b></p>
<p>I have 6 sides. I have an x in my name. What shape am I?</p>		<p><b>Hexagon</b></p>
<p>I have 8 sides and 8 corners. There is a theatre in Bolton with my name. What shape am I?</p>		<p><b>Octagon</b></p>
<p>I have 4 sides and 4 corners but I am not a square or a rectangle. My opposite sides are parallel. What am I?</p>		<p><b>Parallelogram</b></p>
<p>My name sounds like an act at the circus. I also look like a flat plant pot. I have 4 sides. What shape am I?</p>		<p><b>Trapezium</b></p>

Name: \_\_\_\_\_ Date: \_\_\_\_\_

<p>I am a solid shape and I look like a dice. What shape am I?</p>		<p><b>Cube</b></p>
<p>A shoebox looks like me. I am a solid shape and have 2 long sides and 2 short sides. What shape am I?</p>		<p><b>Cuboid</b></p>
<p>I am the shape of a football. What shape am I?</p>		<p><b>Sphere</b></p>
<p>There are a lot of my shape in Egypt. I am pointed at the top but I am not flat. What shape am I?</p>		<p><b>Pyramid</b></p>
<p>I look like a tin of beans. I have 2 faces that are the shape of circles. What shape am I?</p>		<p><b>Cylinder</b></p>
<p>You put your ice cream in me. I can also be a party hat. What shape am I?</p>		<p><b>Cone</b></p>

**E3-L2** Use as a matching game or paired card game. Use all three columns or any combination of two columns.