WALT: Recognise 2D and 3D shapes
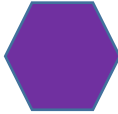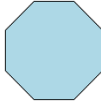
WILF: I can identify 2D and 3D shapes in different orientations in the environment

Name	Shape	Tally of number found
Pentagon		
Circle		
Square		
Triangle		
Hexagon		
Semi-circle		
Sphere		
Cylinder		
Cone		
Cuboid		
Pyramid		
Other shapes that we have found:		

Lesson 2 (LAPs/Aps)

WALT: Count the sides of a 2D shape

WILF: I can recognise curved and straight sides; I can mark each side when counting

Name	Shape	Number of sides
Pentagon		
Circle		
Square		
Triangle		
Hexagon		
Semi-circle		
Octagon		

Here are 18 lollipop sticks. How many octagons can you make?

Use the sticks to work out the problem practically.
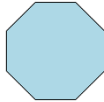
Can you draw what you did?

Can you write a calculation to prove that you are correct?

<u>Lesson 2 (Aps/HAPs)</u>

<u>WALT: Count the sides of a 2D shape</u>

WILF: I can recognise curved and straight sides; I can mark each side when counting

Name	Shape	Number of sides	Describe the sides Straight, curved, equal
Pentagon			
Circle			
Square			
Triangle			
Hexagon			
Semi-circle			
Octagon			

Here are 18 lollipop sticks. How many octagons can you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Here are 18 lolly sticks. How
Many squares could you make?

Show how you worked out the problem to prove that you are correct.

Many of each shape could you make?

Show how you worked out the problem to prove that you are correct.

Shape	Number of each shape	Calculation to prove that I am correct
triangle		
square		
pentagon		
hexagon		
octagon		

Here are 18 lolly sticks.   How

Many of each shape could you make?

Show how you worked out the problem to prove that you are correct.

Shape	Number of each shape	Calculation to prove that I am correct
triangle		
square		
pentagon		

<u>Lesson 3</u>

<u>WALT:</u> count the vertices on 2D shapes
<u>WILFs:</u> I understand that a vertex is where two lines meet at a point
I can mark each vertex when counting

Let's investigate:

On a 2D shape, the number of vertices is always equal to the number of sides.

Do you agree? How will you test this and prove you are correct?

shape	Number of sides	Number of vertices	Equal ✓ or ✗
triangle			
square			
oblong			
pentagon			
hexagon			
octagon			

Now explain what you have found out:

What about these shapes?
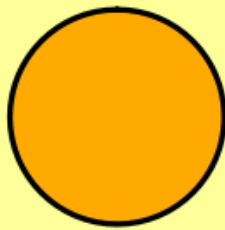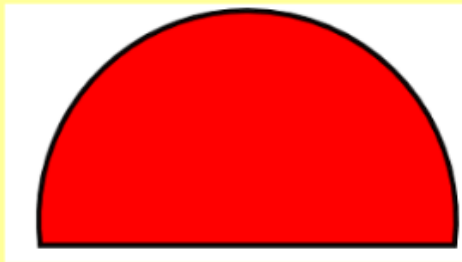
How many vertices do they have?   Do they follow the same rule?

What about these shapes?
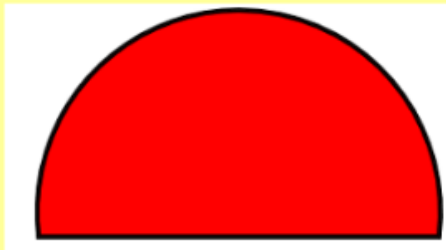
How many vertices do they have?   Do they follow the same rule?

Complete this table: (LAPs)

	Number of vertices
2 squares	
4 triangles	
2 pentagons	

Complete this table: (Aps)

	Calculation	Number of vertices
2 squares		
4 triangles		
2 pentagons		

Complete this table: (HAPs)

	Calculation	Number of vertices
2 squares		
4 triangles		
2 pentagons		
5 oblongs		
3 octagons		

Lesson 4 (LAPs) (If children have squared books)

WALT: Draw 2D shapes

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong and triangle?

Lesson 4 (APs)

WALT: Draw 2D shapes

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong, triangle and pentagon?

Lesson 4 (HAPs)

WALT: Draw 2D shapes

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Draw a large oblong on squared paper

Draw a square inside the oblong

Draw a triangle underneath the rectangle

Draw a pentagon that is bigger than the square

Lesson 4 (LAPs)

<u>WALT: Draw 2D shapes</u>

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong and triangle?
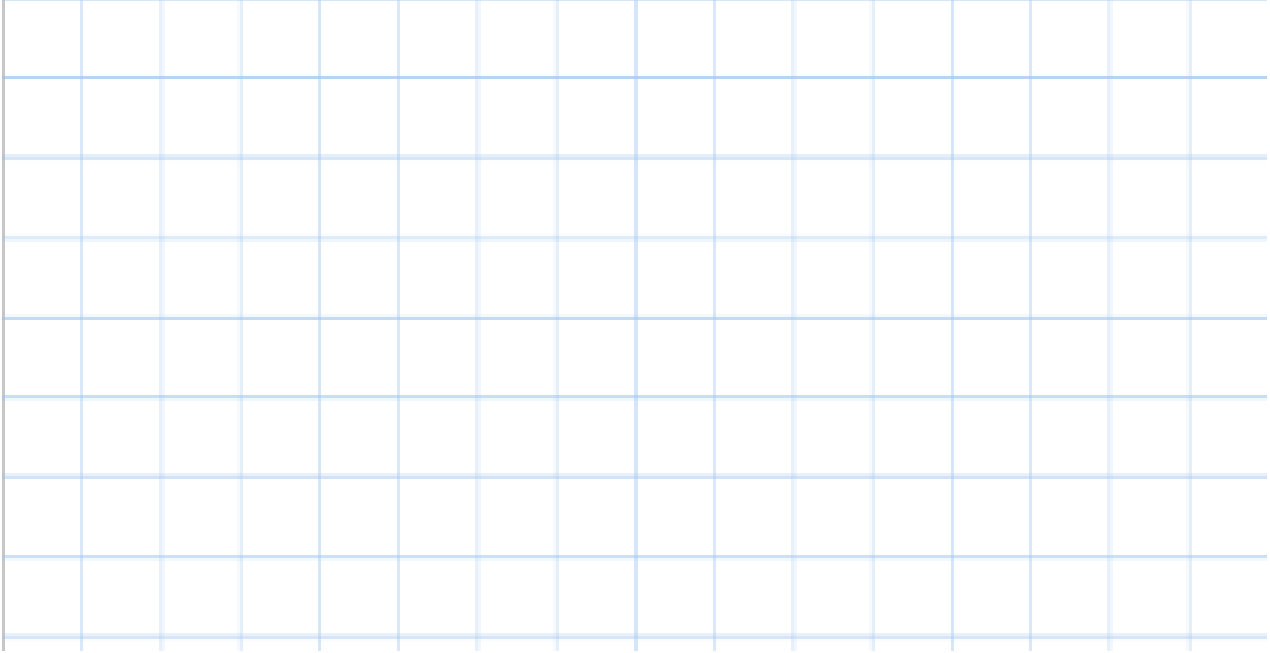
<u>WALT: Draw 2D shapes</u>

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong and triangle?

Lesson 4 (APs)

<u>WALT: Draw 2D shapes</u>

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong, triangle and pentagon?

<u>WALT: Draw 2D shapes</u>

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Can you draw a: square, oblong, triangle and pentagon?

Lesson 4 (HAPs)

<u>WALT: Draw 2D shapes</u>

WILF: I can make shapes on a geoboard

I can use a ruler to draw shapes on squared paper

Draw a large oblong on squared paper

Draw a square inside the oblong

Draw a triangle underneath the rectangle

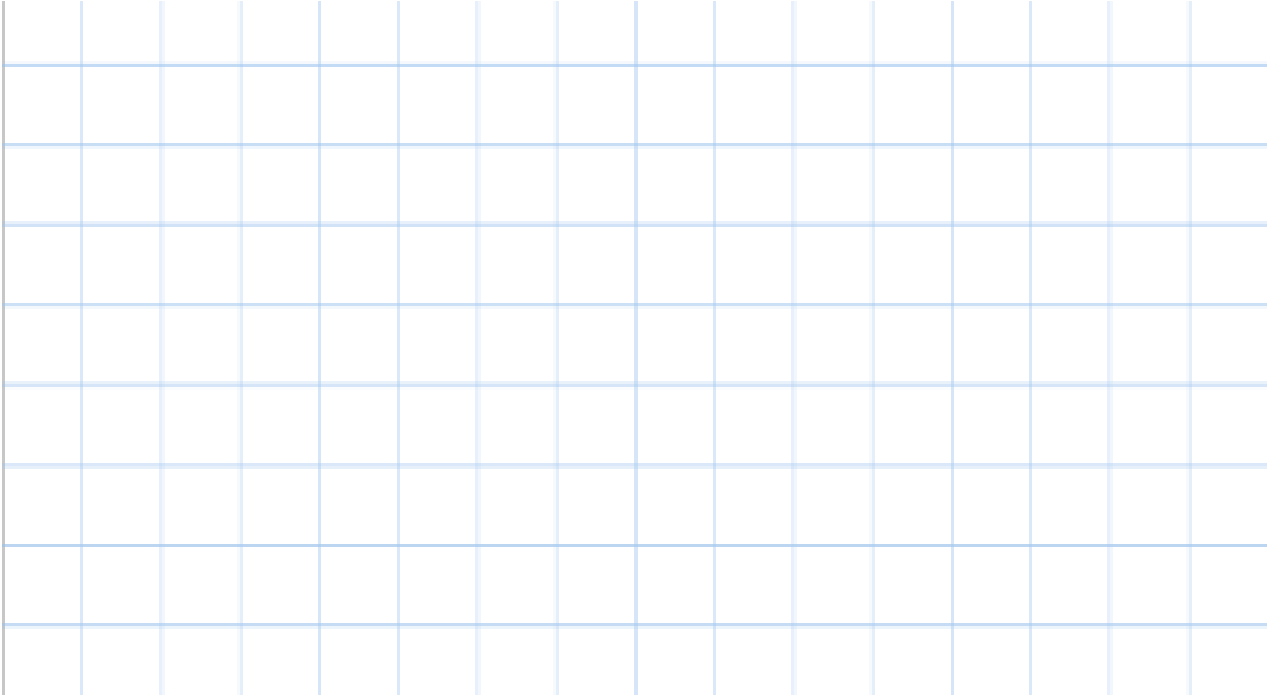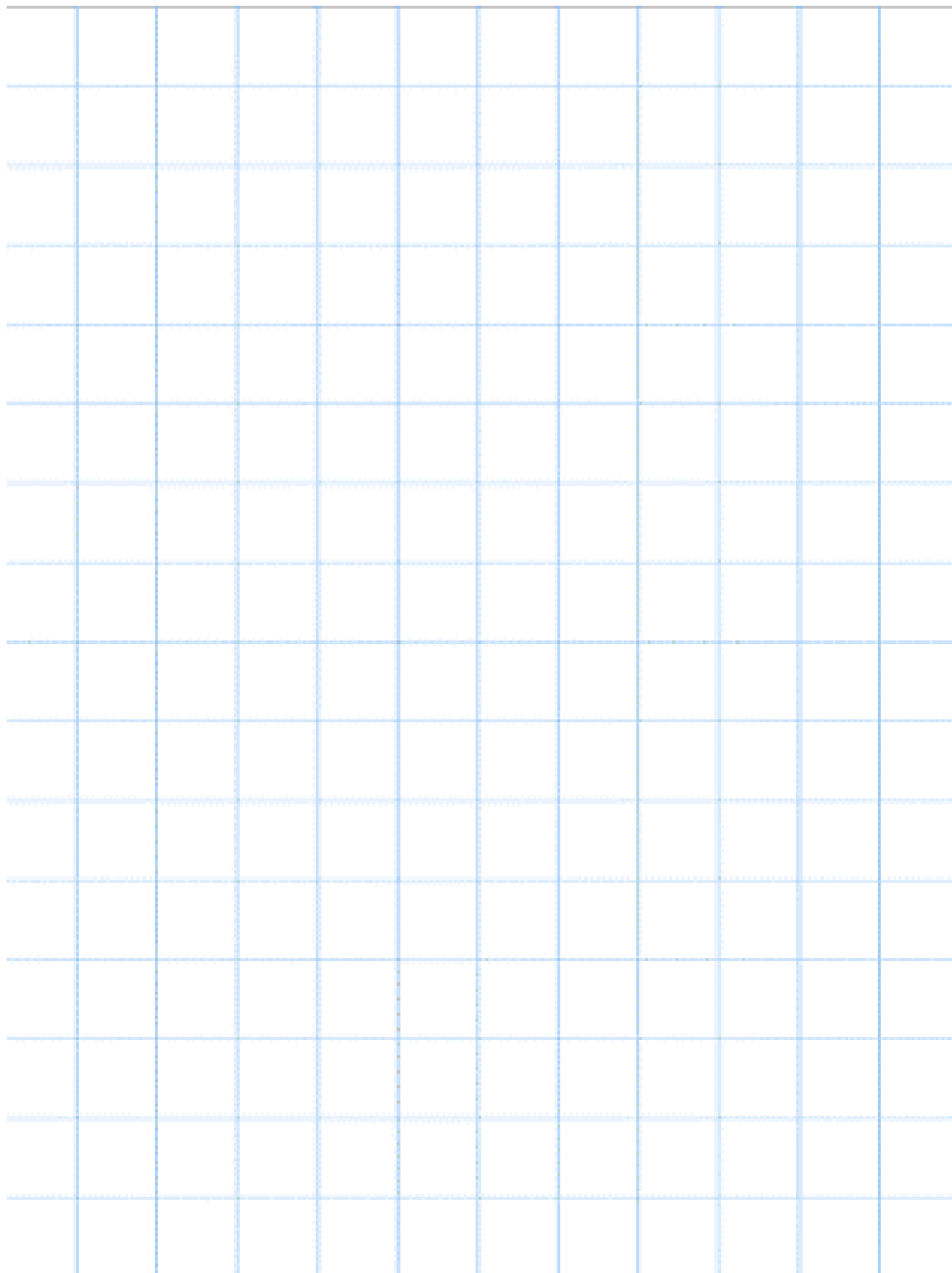Draw a pentagon that is bigger than the square

Lesson 4 (LAPs)

Greater Depth Challenge:

I have joined three dots to make a triangle which has one dot inside it. How many different triangles with one dot in the middle can you make using an elastic band on a geoboard? Take a photo or draw each one that you do.
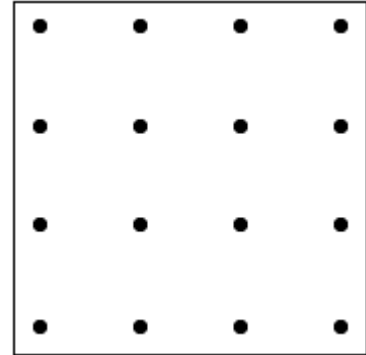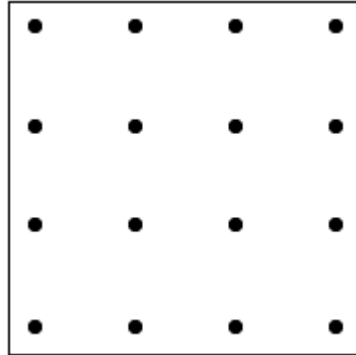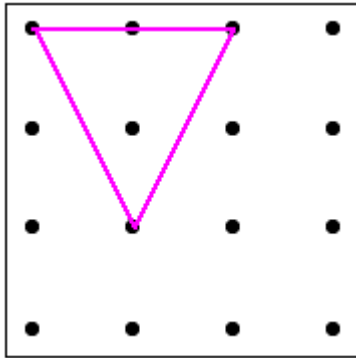
Greater Depth Challenge:

I have joined three dots to make a triangle which has one dot inside it. How many different triangles with one dot in the middle can you make using an elastic band on a geoboard? Take a photo or draw each one that you do.

Lesson 4 (Aps & HAPs)

Greater Depth Challenge:

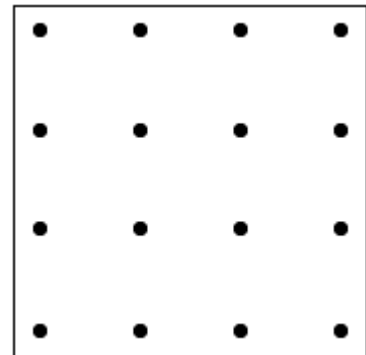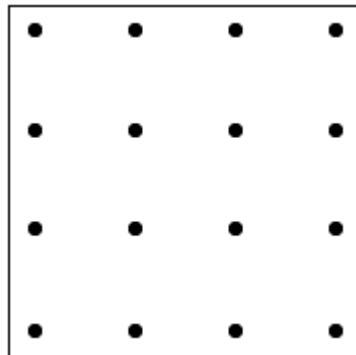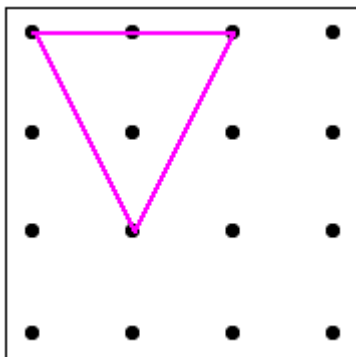*I have joined three dots to make a triangle which has one dot inside it. How many different triangles with one dot in the middle can you make using an elastic band on a geoboard? Take a photo or draw each one that you do.*
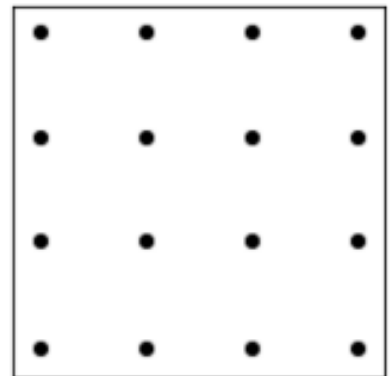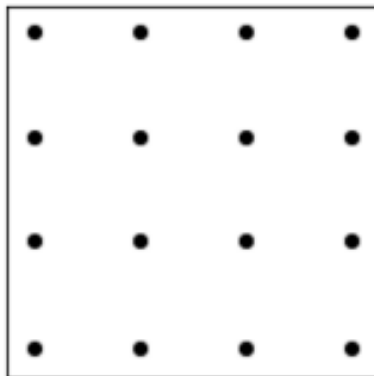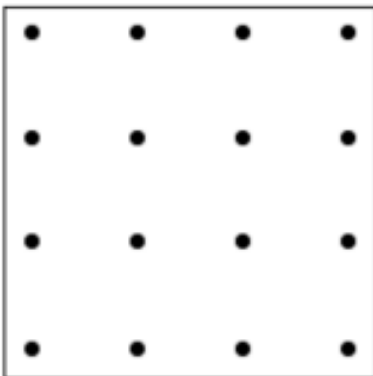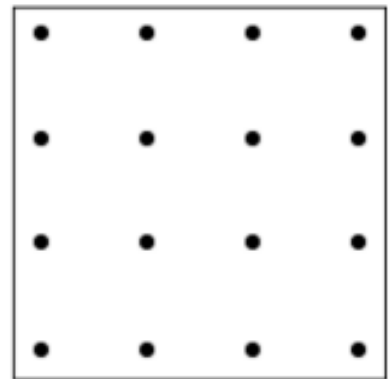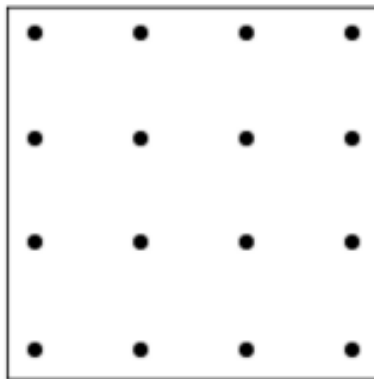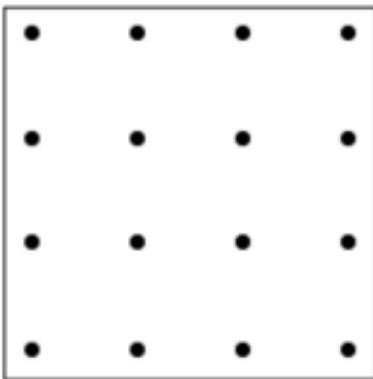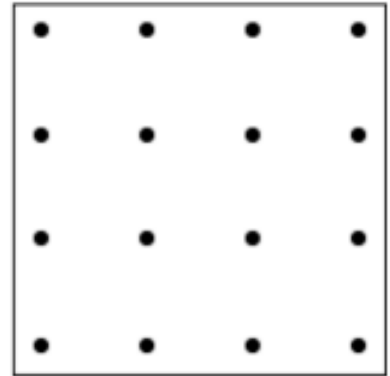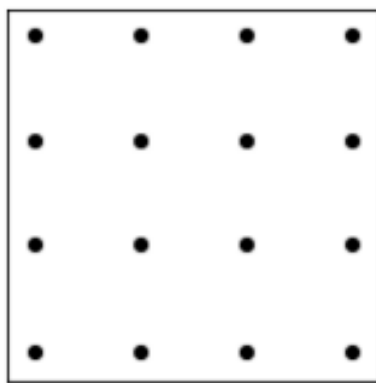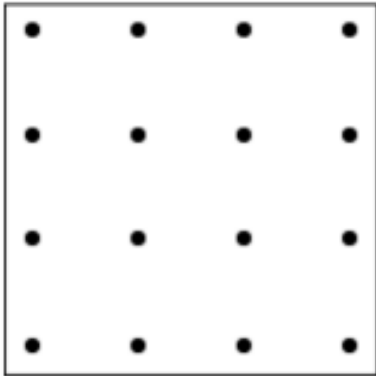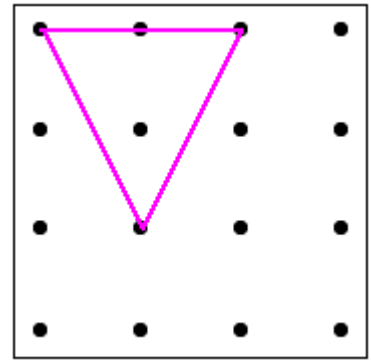
Lesson 6

<u>WALT: Recognise lines of symmetry</u>

WILF: I can recognise horizontal and vertical lines of symmetry.

I can fold along lines of symmetry and use a mirror to check

Draw on the VERTICAL lines of symmetry

Challenge: Can you draw any other lines of symmetry on in a different colour?

TOP TIP:

(Remember that you can turn the paper around to help you!)

Greater Depth Challenge

These shapes have been cut in half along their VERTICAL line of symmetry. Can you draw the rest of the shape? Use your mirror to help you. You might find it helpful to plot the vertices first by counting the squares and then draw the sides with a ruler.
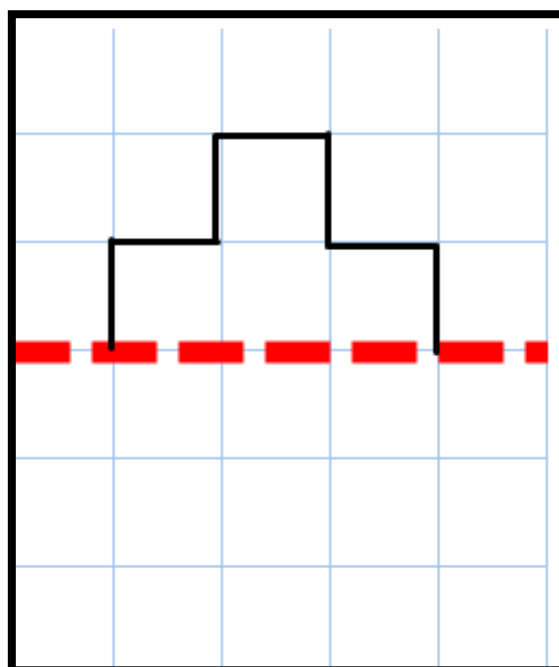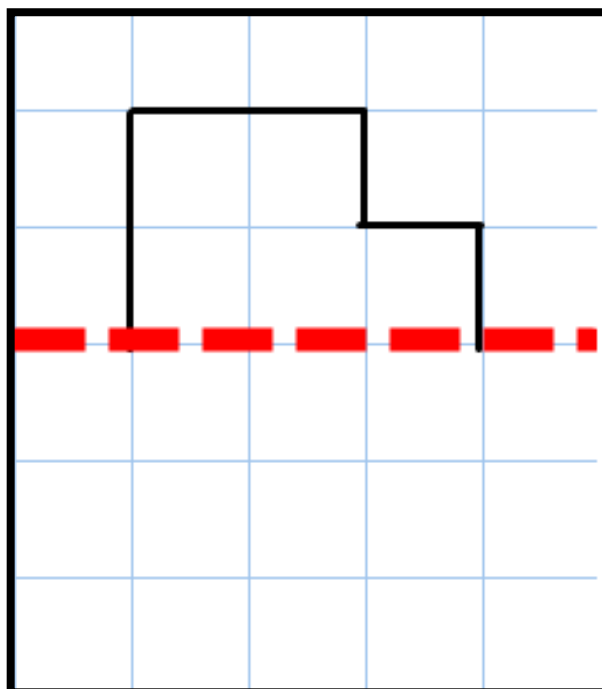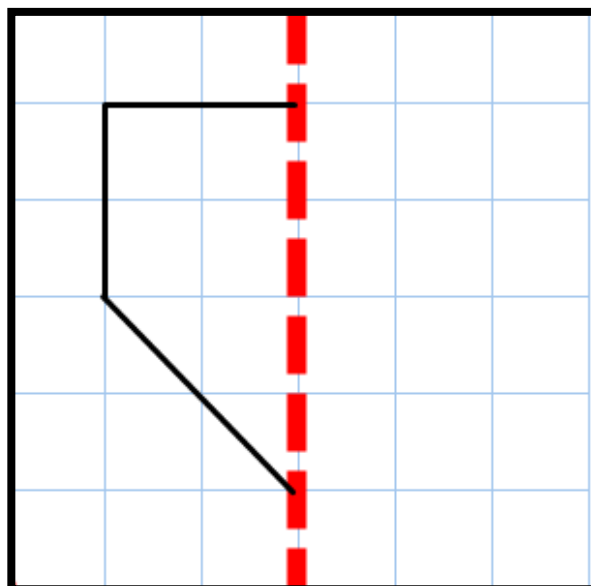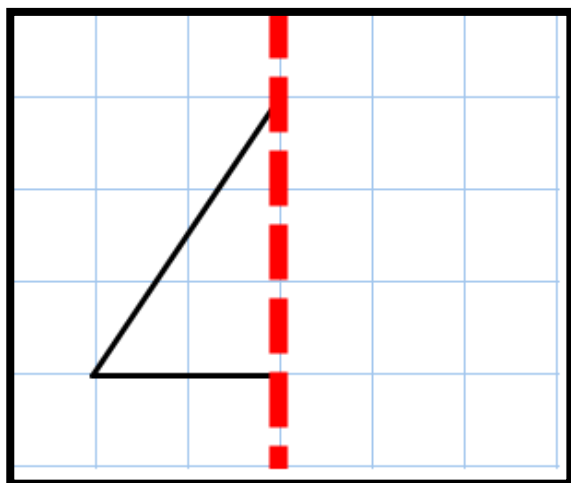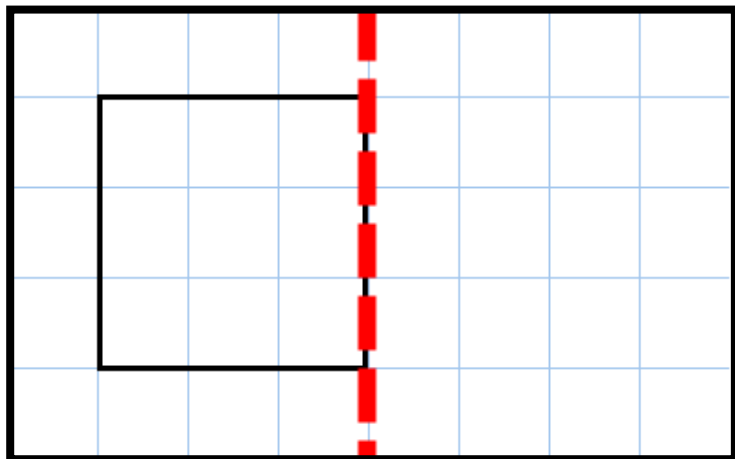
Greater Depth Challenge

These shapes have been cut in half along their VERTICAL line of symmetry. Can you draw the rest of the shape? Use your mirror to help you. You might find it helpful to plot the vertices first by counting the squares and then draw the sides with a ruler.
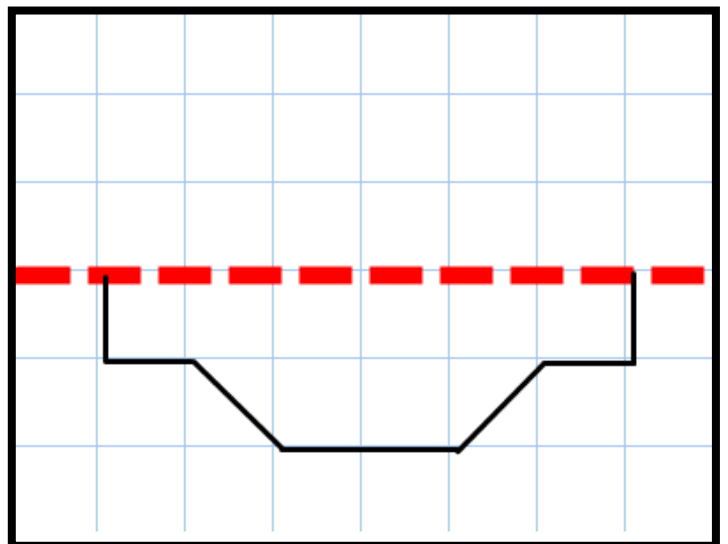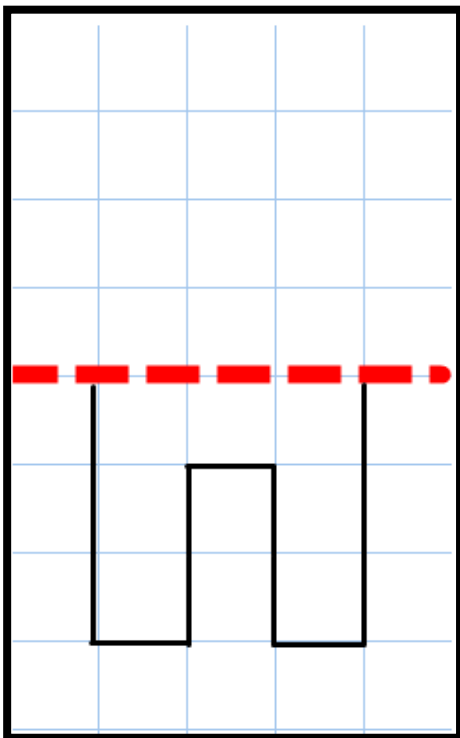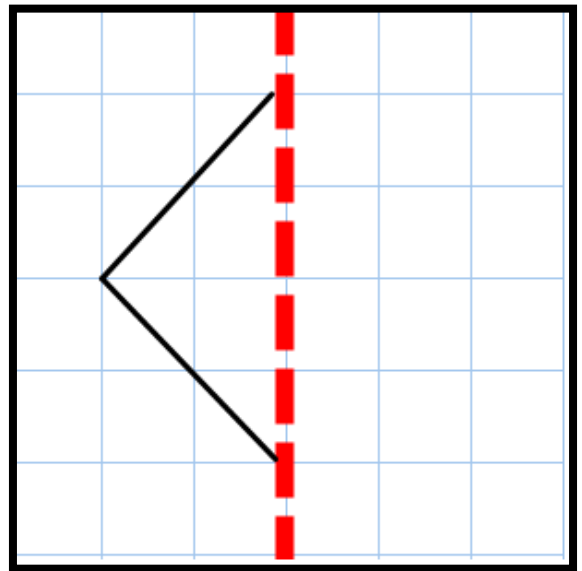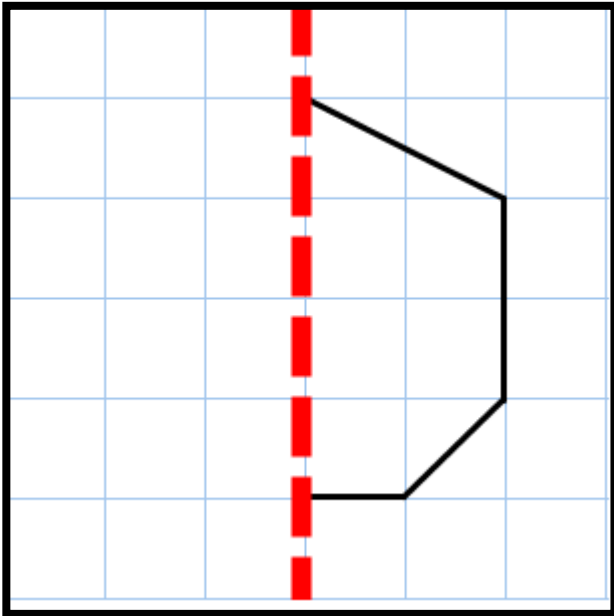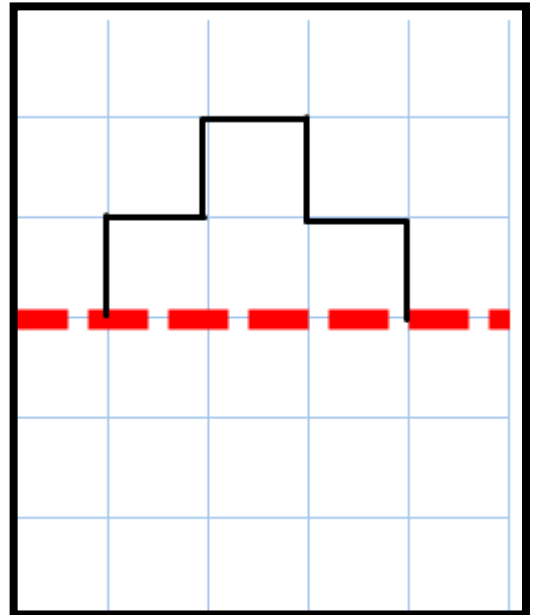
Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can recognise horizontal and vertical lines of symmetry.

WILF: I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 7

<u>WALT: Sort 2D shapes</u>

WILF: I can use the properties of shapes to sort them onto Venn diagrams.

Lesson 8 (Aps and HAPs)

<u>WALT: Make patterns with 2D shapes</u>

WILF: I can describe and continue patterns

I can work out what the _th shape will be

I think that the 12th shape in this pattern will be a triangle.

Do you agree?   Can you prove that you are correct?

Lesson 8

<u>WALT: Make patterns with 2D shapes</u>

WILF: I can describe and continue patterns

I can work out what the _th shape will be
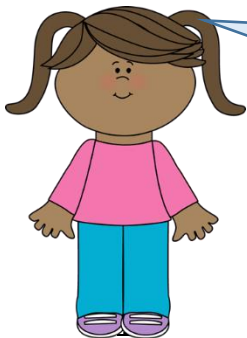
I think that the 12th shape in this pattern will be a triangle.

Do you agree?   Can you prove that you are correct?

Lesson 8

<u>WALT: Make patterns with 2D shapes</u>

WILF: I can describe and continue patterns

I can work out what the _th shape will be

I think that the 12th shape in this pattern will be a triangle.

Do you agree?   Can you prove that you are correct?

Greater depth challenge

Can you work out which shapes will be triangles if you used 30 shapes?

Greater depth challenge

Can you work out which shapes will be triangles if you used 20 shapes?

Greater depth challenge

Can you work out which shapes will be triangles if you used 30 shapes?

Greater depth challenge

Can you work out which shapes will be triangles if you used 30 shapes?

Greater depth challenge

Can you work out which shapes w

Greater depth challenge

Can you work out which shapes will be triangles if you used 30 shapes?

Greater depth challenge

Can you work out which shapes will be triangles if you used 30 shapes?

My 3D shape has 6 faces.

Your shape must be a cube.

Tom

Lily

Is Lily correct? Explain your answer.

LESSON 9 – GREATER DEPTH CHALLENGE – HAPs
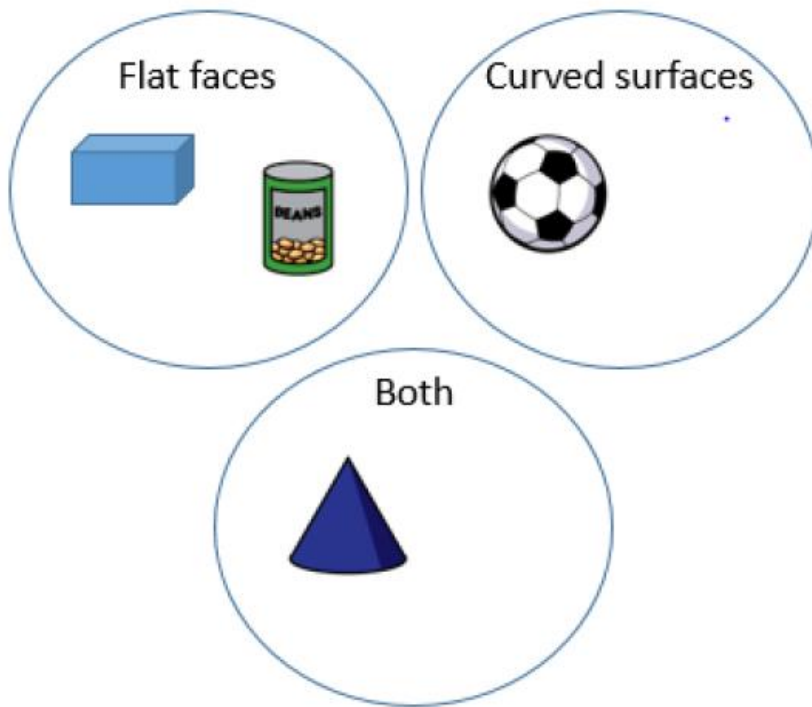
Flat faces

Curved surfaces

Both

These 3D shapes have been sorted into these sets. Can you spot which shape is in the wrong place? Can you explain why?

....

....

....

....

Add these shapes to the correct sets:

Cube   pyramid   triangular prism

LESSON 9 – GREATER DEPTH CHALLENGE – LAPs & APs

Flat faces

Curved surfaces

Both
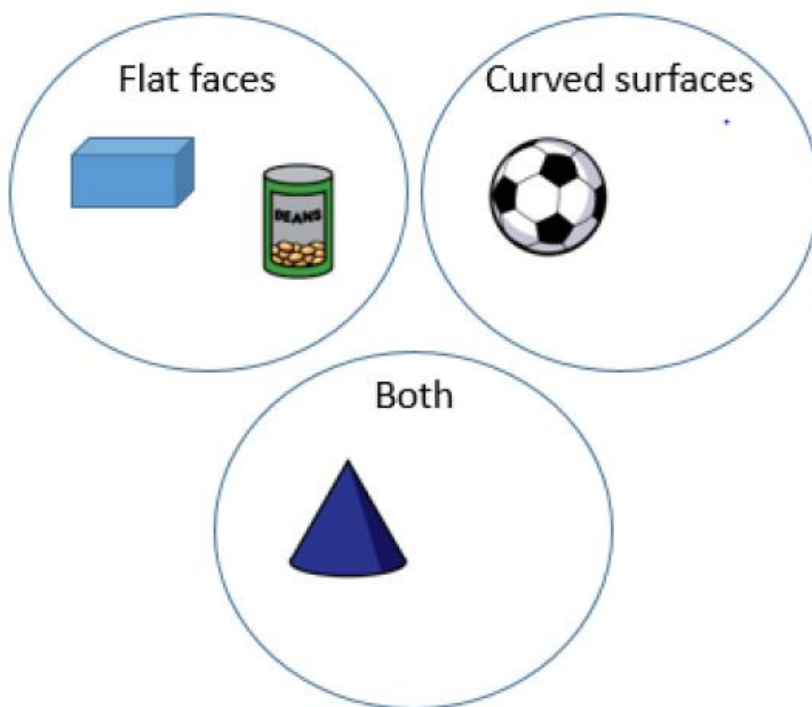
These 3D shapes have been sorted into these sets.

Which shape is in the wrong set?

....

Which set should it be in?

....

Add these shapes to the correct sets:

Cube   *pyramid*

My 3D shape has
12 edges.

Tom

That could be a cube,
a cuboid or a square-
based pyramid.

Lily

Is Lily correct? Explain your answer.

My 3D shape has
12 edges.

Tom

That could be a cube,
a cuboid or a square-
based pyramid.

Lily

Is Lily correct? Explain your answer.

face

Cube

edge

Cuboid
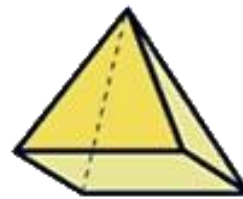
Square based
pyramid
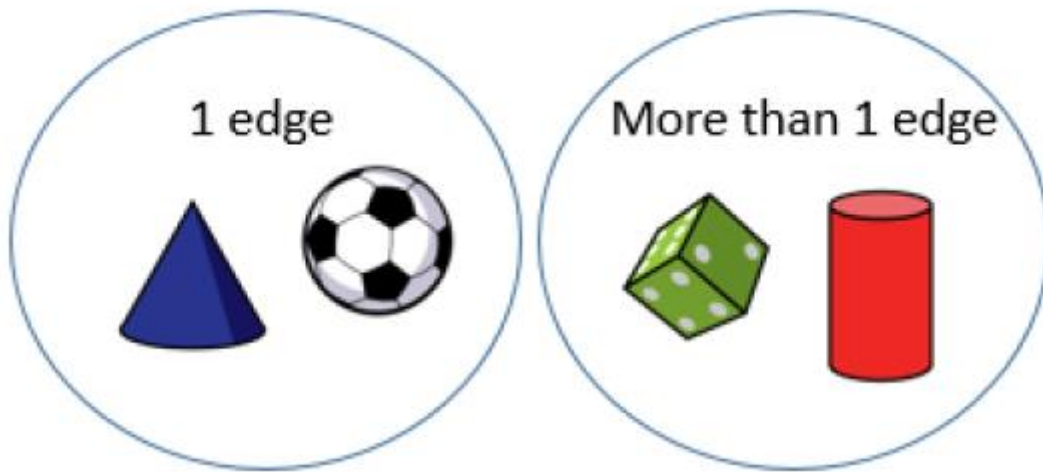
1 edge

More than 1 edge

These 3D shapes have been sorted into these sets. Can you spot which shape is in the wrong place? Can you explain why?

....

....

Can you think of some shapes that could go in the 'More than 1 edge' set?

....

....

Can you think of another shape that could go in the '1 edge' set?

....

1 edge

More than 1 edge

These 3D shapes have been sorted into these sets. Can you spot which shape is in the wrong place?

....

Why is it in the wrong place?

....

....

Can you think of another shape that could go in the 'more than 1 edge' set?

....

Lesson 11 – Greater depth challenge (HAPs)

Jack says:
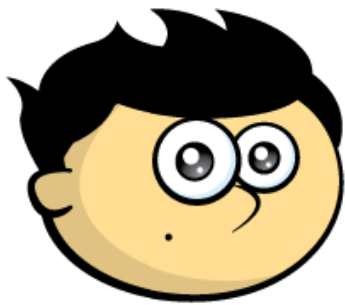
All 3D shapes have at least one vertex.

Do you think this statement is TRUE or FALSE?

Explain why.

Lesson 11 – Greater depth challenge (Aps & LAPs)

Jack says:

All 3D shapes have at least one vertex.

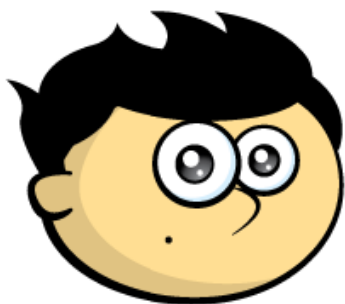*Do you think this statement is TRUE or FALSE?*

I think that this statement is true/false because ......

....

....

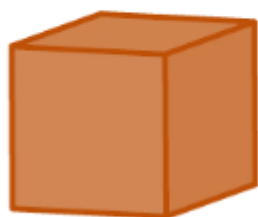..

Lesson 11 – Greater depth challenge (HAPs)

What is the SAME and what is DIFFERENT about these two shapes?
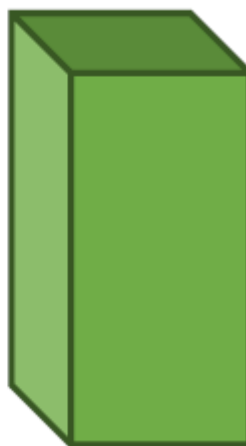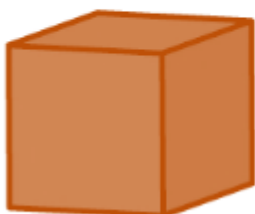
Use these words when comparing:

Faces   edges   vertices

FACES..

....

EDGES...

....

VERTICES...

Lesson 12

(Practical session – take photo to stick below)

WALT: Sort 3D shapes

WILF: I can group 3D shapes based on their properties and can describe how 3D shapes have been grouped.