THIRD SPACE
LEARNING

Ready-to-go Lesson Slides Year 2

Please note:
3-D shapes, real-life 3-D objects and sorting hoops or similar are needed for this lesson.

Geometry: Properties of Shapes

Lesson 11

Spr3

At Third Space Learning we provide personalised online lessons from specialist maths tutors to support the target groups in your school.

These ready-to-go slides are designed to work alongside our interventions to supplement quality first teaching and raise attainment in maths for all pupils.

To find out more about how you could use our 1-to-1 interventions year-round to boost maths progress in your school then get in touch:

020 3771 0095
hello@thirdspacelearning.com

Boosting maths progress through 1-to-1 conversations…

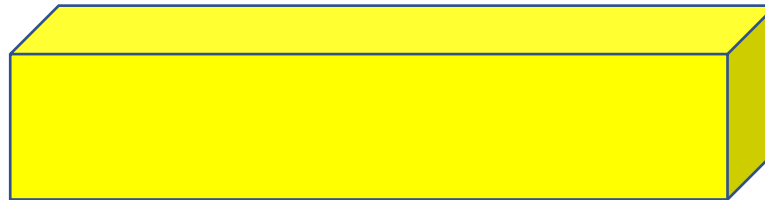THIRD SPACE LEARNING

To sort 3-D shapes

Success Criteria:

❑ I can sort 3D shapes into different groups
❑ I can label real life objects as 3D shapes

Starter:

Alena has found out a clever fact about
3-D shapes.

The number of edges + 2 = the number of faces + the number of vertices.

Does this work for a cuboid?

To sort 3-D shapes

Starter:

Alena has found out a clever fact about 3-D shapes.

The number of edges + 2 = the number of faces + the number of vertices.

Does this work for a cuboid?

The number of edges + 2 = the number of faces + the number of vertices.

          12   + 2 =   6   +   8.

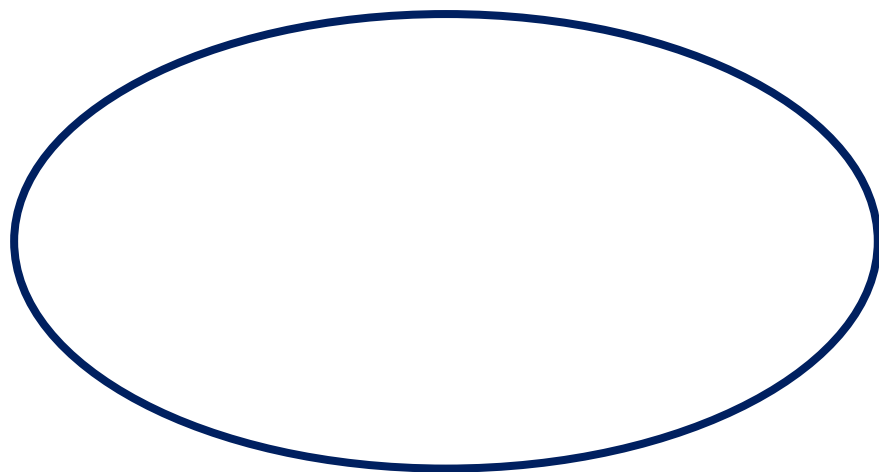   14   =   14.

So, this does work for the cuboid.

Extension:
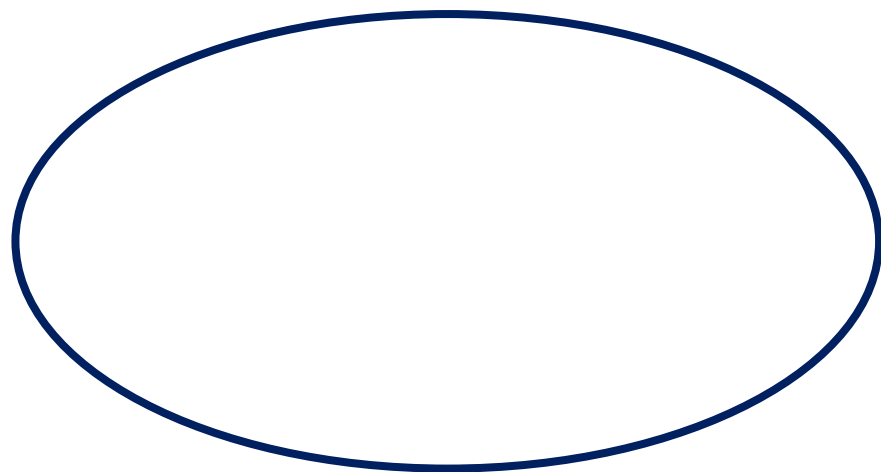Does this work for other 3-D shapes? Can you investigate?

To sort 3-D shapes

Talking Time:

Can you sort these real 3-D shapes into the correct groups?

has a curved surface

no curved surfaces

To sort 3-D shapes

Talking Time:

Can you sort these real 3-D shapes
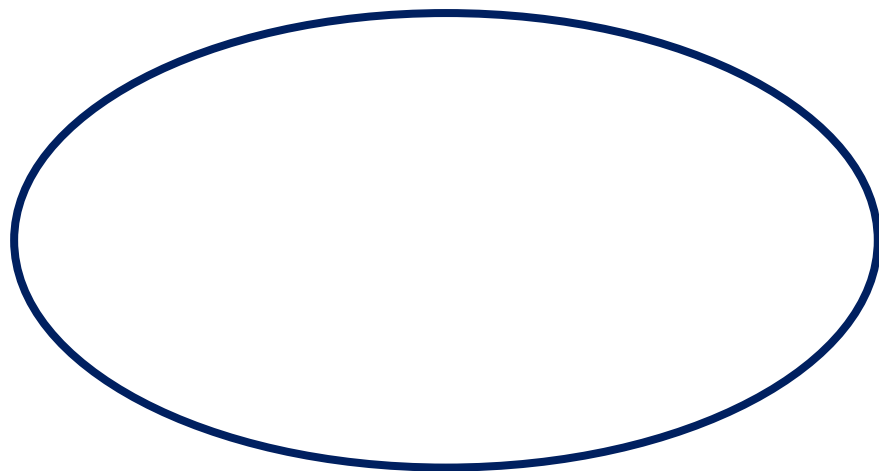into the correct groups?
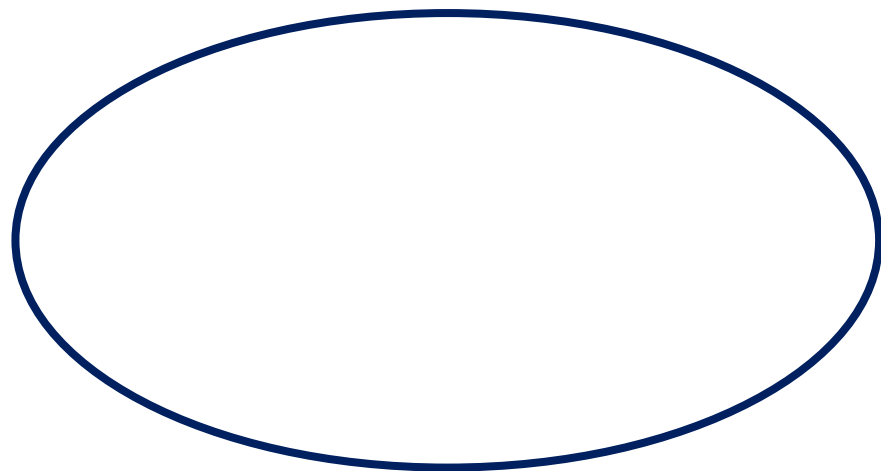

has a curved surface

no curved surfaces

To sort 3-D shapes

Talking Time:

Can you sort these real 3-D shapes into the correct groups?

can be stacked

cannot be stacked

To sort 3-D shapes

Talking Time:

Can you sort these real 3-D shapes
into the correct groups?

can be stacked

cannot be stacked

To sort 3-D shapes

Talking Time:

Can you think of another real 3-D object that could fit into each of the two sorting groups?

has a curved surface

no curved surfaces

To sort 3-D shapes

Talking Time:

Can you think of another real 3-D object that could fit into each of the two sorting groups?

Here is one answer. You may have thought of others.

A tens rod has no curved surfaces.

A toy wheel has a curved surface.

has a curved surface

no curved surfaces

To sort 3-D shapes

Activity 1: Here is a Venn diagram.
Can you put the shapes into the right places?
Where will the sphere and triangular prism go?

has a square face   orange

To sort 3-D shapes

Activity 1: Here is a Venn diagram.
Can you put the shapes into the right places?
Where will the sphere and triangular prism go?

has a square face   orange
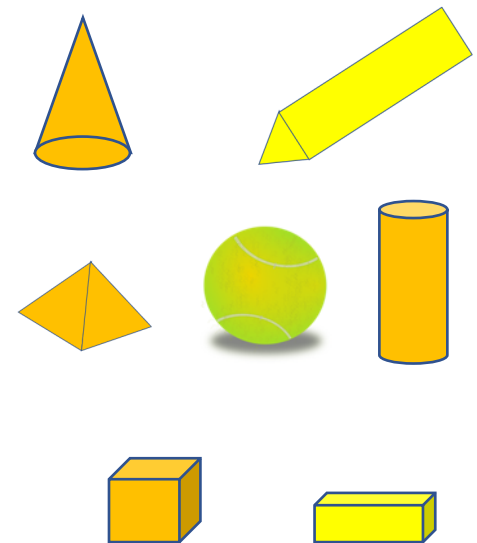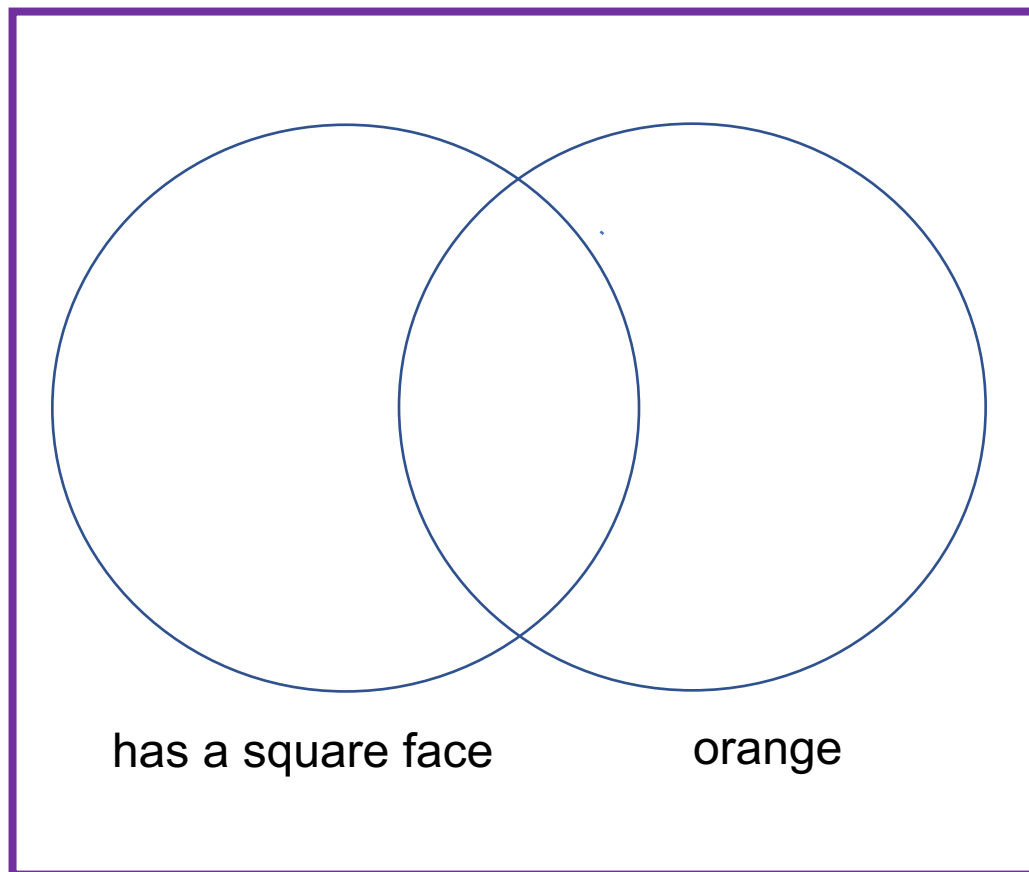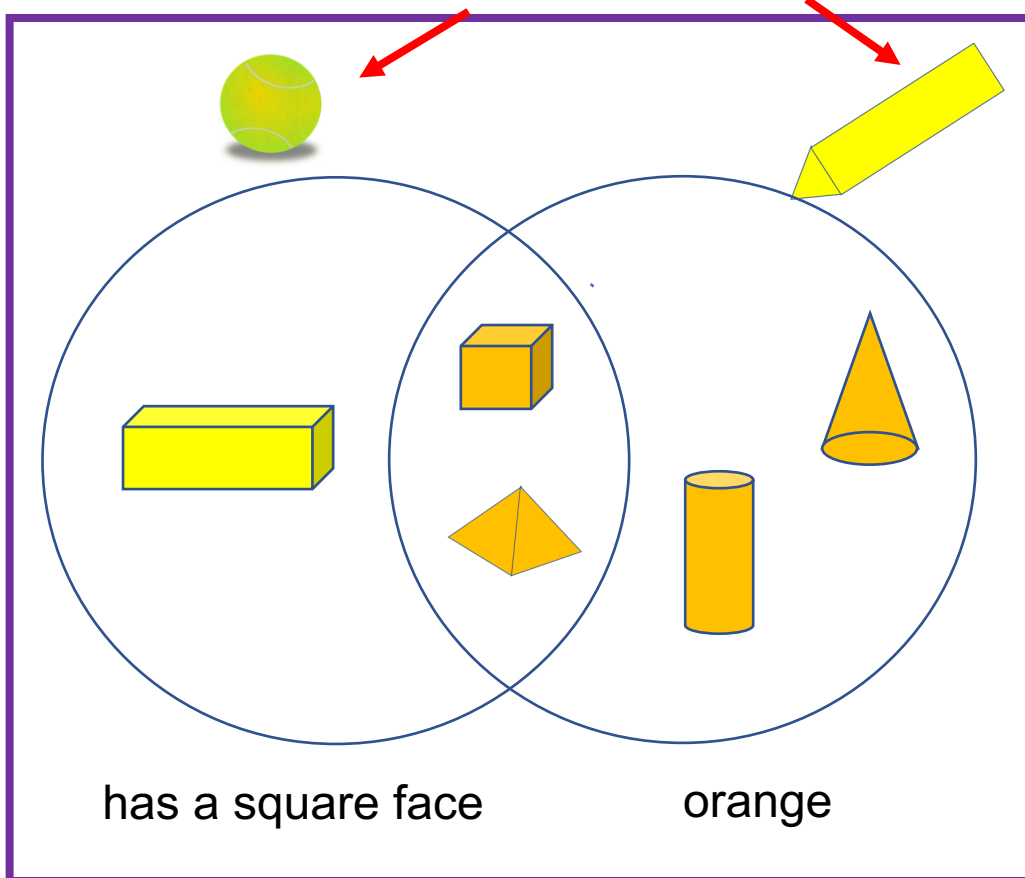
The sphere is yellow and has no square faces.
The triangular prism is yellow and has no square faces.
That is why they are not in the hoops and stay outside.

Extension:
Can you use the same shapes and the same sorting diagram, but think of two different labels?

To sort 3-D shapes

Talking Time:

How have these 3-D shapes been sorted?
Can you write some labels for the sorting hoops?
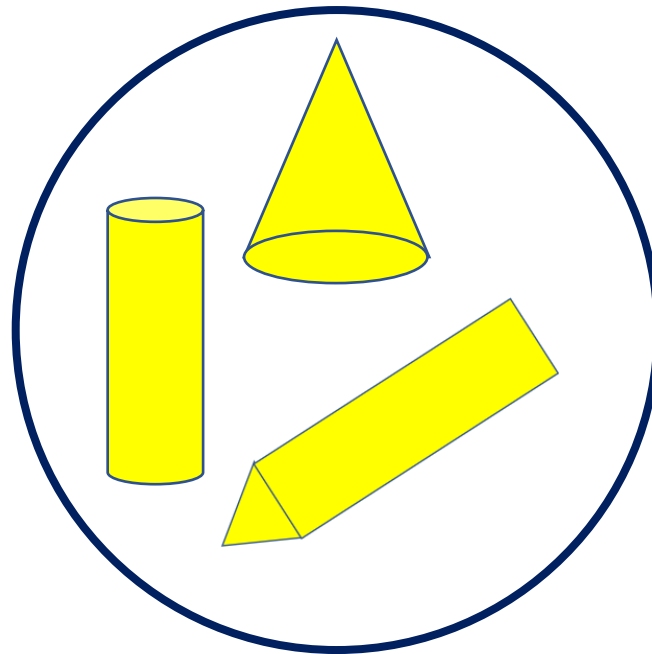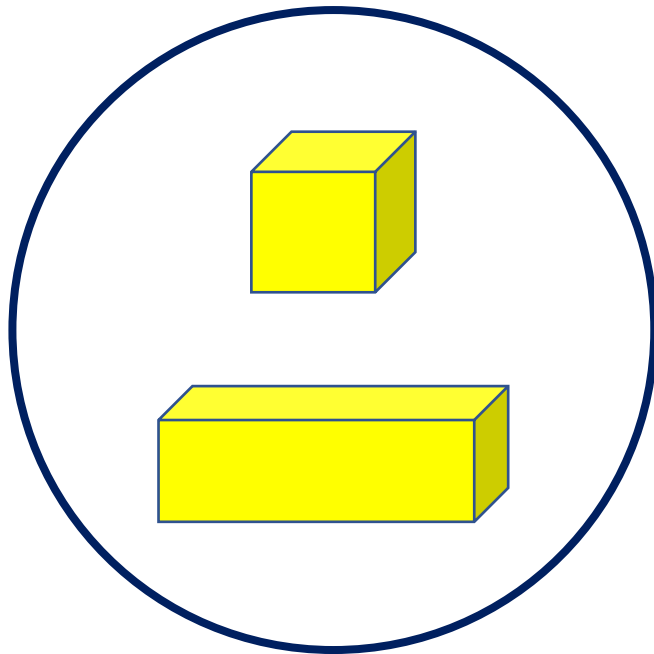
To sort 3-D shapes

Talking Time:

How have these 3-D shapes been sorted?
Can you write some labels for the sorting hoops?
This is one answer. There could be others.

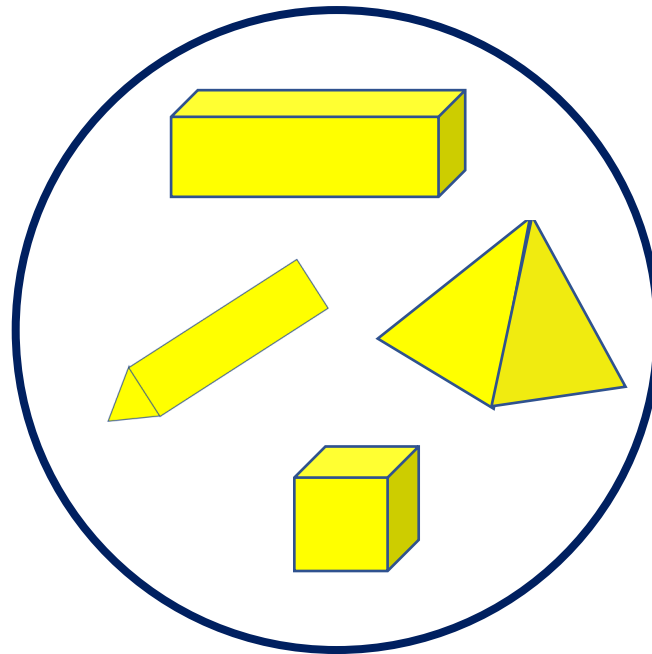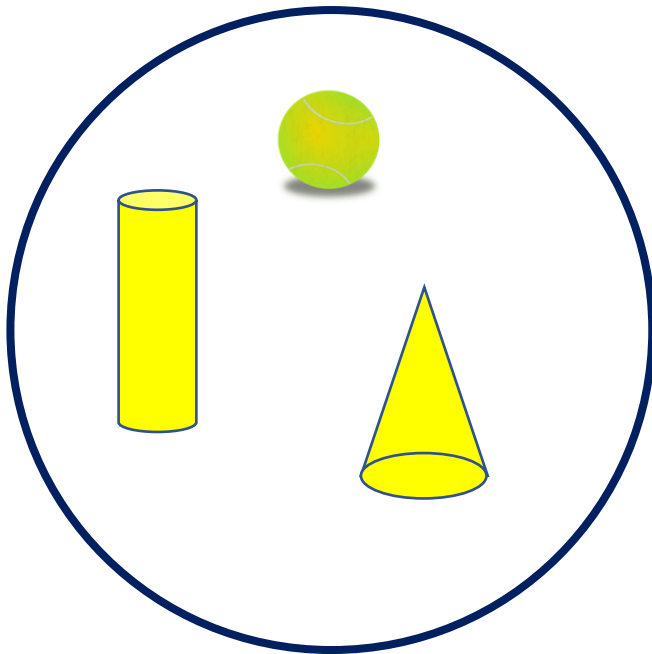shapes with 12 edges
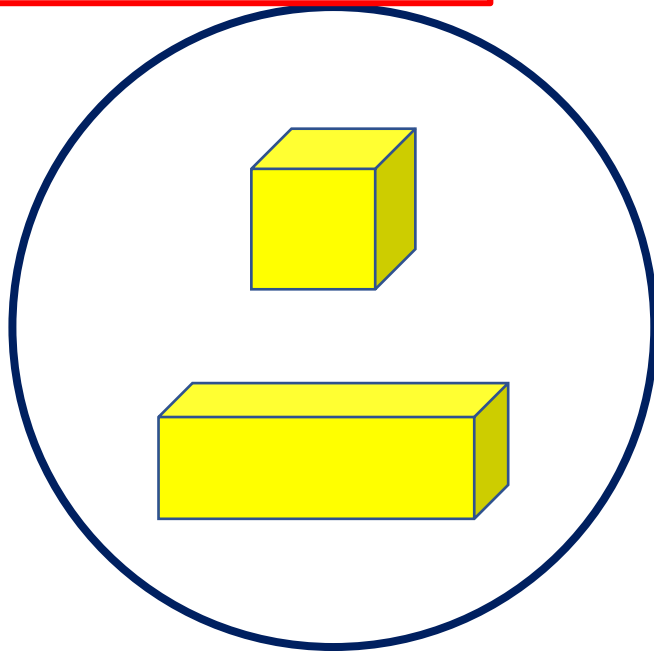
shapes with < 12 edges
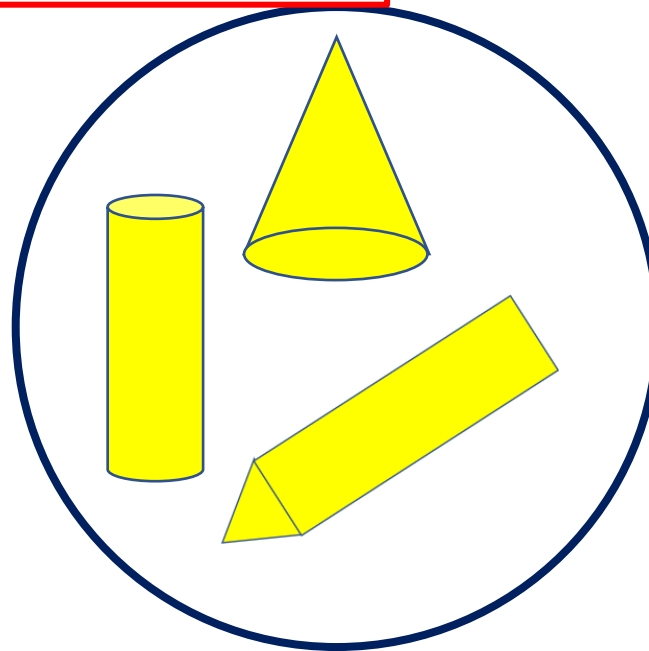
Extension:
Can you find two different labels that would match the same shape sorts?

To sort 3-D shapes

Talking Time:

How have these 3-D shapes been sorted?
Can you write some labels for the sorting hoops?

To sort 3-D shapes

Talking Time:

How have these 3-D shapes been sorted?
Can you write some labels for the sorting hoops?

This is one answer. There could be others.
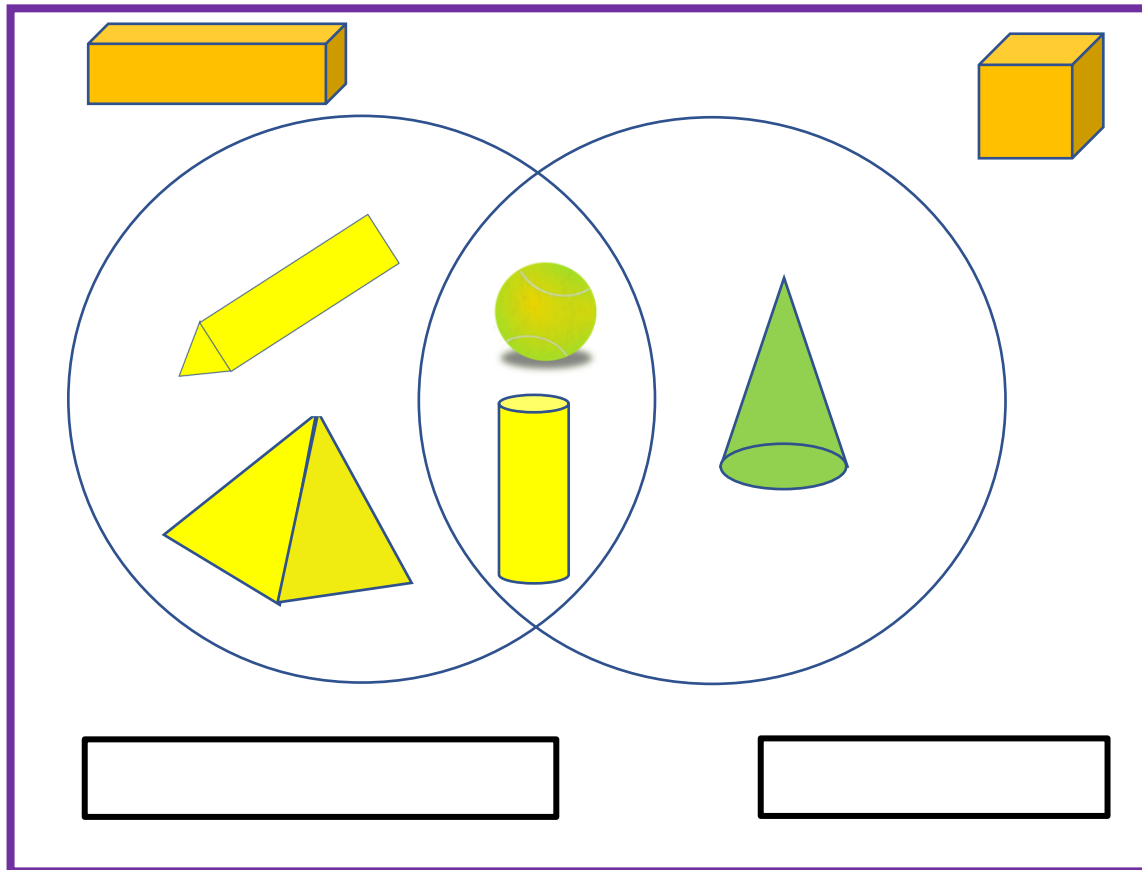
shapes with a
curved surface
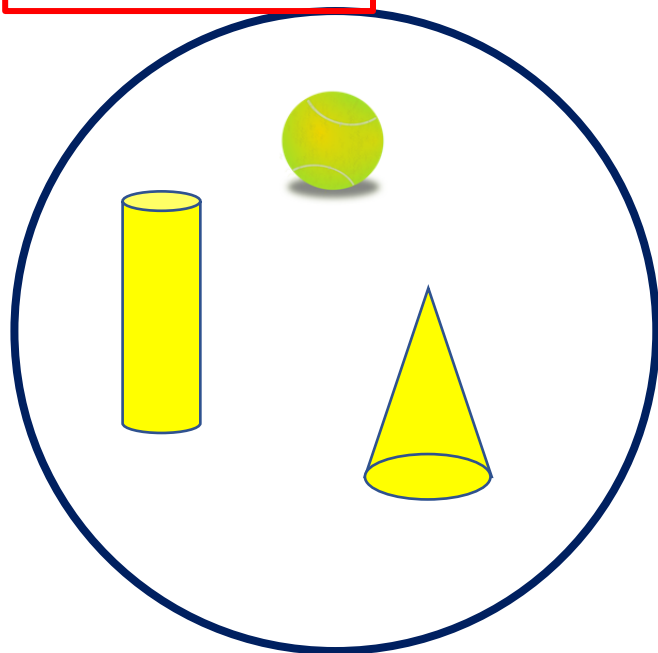
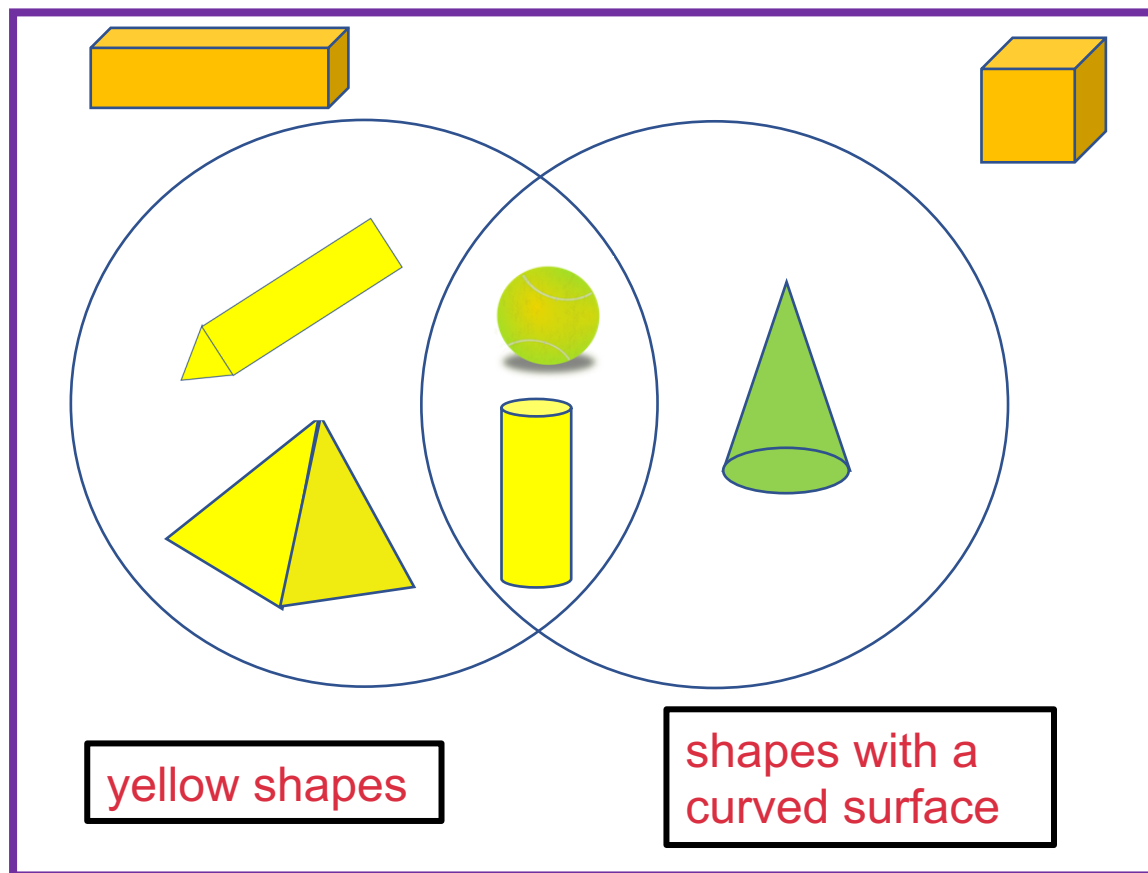shapes with no
curved surfaces
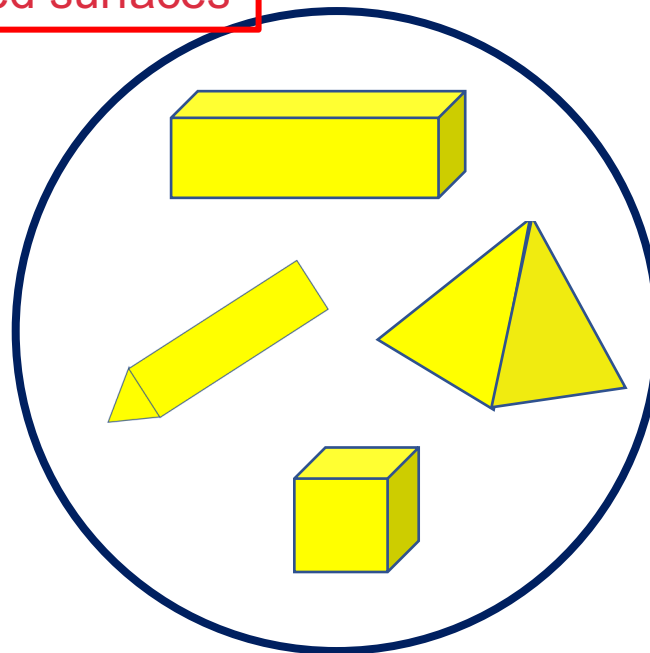
To sort 3-D shapes

Talking Time: Some 3-D shapes have been sorted into this Venn diagram.
Can you complete the labels?

To sort 3-D shapes

Talking Time: Some 3-D shapes have been sorted into this
Venn diagram.
Can you complete the labels?

yellow shapes

shapes with a
curved surface

To sort 3-D shapes

Activity 2:

Can you work out which shape is in the wrong place?
Can you explain or show why it should be in the other part of the sorting diagram?

shapes with < 6 edges	shapes with > 6 edges

To sort 3-D shapes

Activity 2:

Can you work out which shape is in the wrong place?
Can you explain or show why it should be in the other part of the sorting diagram?

shapes with < 6 edges	shapes with > 6 edges

The pyramid is in the wrong place.

A pyramid has 8 edges, so it should be in the other section.
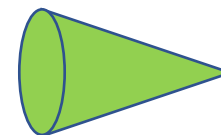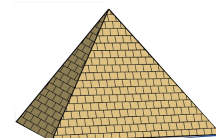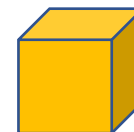
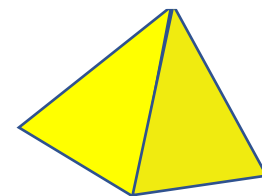# To sort 3-D shapes

Talking Time:

Jenson is going to sort some shapes
by the number of vertices.
He will sort them into this diagram.
Can you sort them as well and see if you agree with
Jenson's sorting?

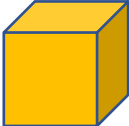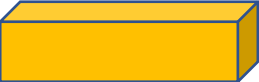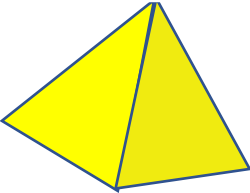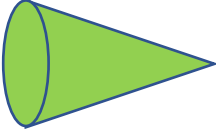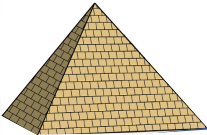| shapes that have 8 vertices	shapes that do not have 8 vertices

To sort 3-D shapes

Talking Time:

Jenson is going to sort some shapes
by the number of vertices.
He will sort them into this diagram.
Can you sort them as well and see if you agree with
Jenson's sorting?

shapes that have 8 vertices	shapes that do not have 8 vertices

To sort 3-D shapes

Talking Time:

Jenson is going to sort the same shapes again. He will sort them into this diagram.

How might Jenson sort them this time?
What will the titles of each section be?

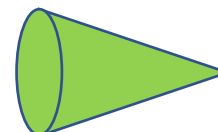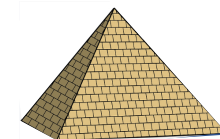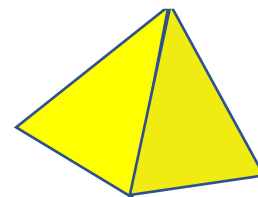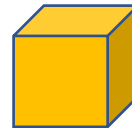| shapes _____	shapes _____

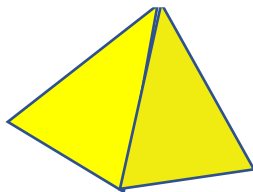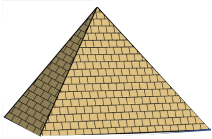# To sort 3-D shapes

Talking Time:

Jenson is going to sort the same shapes again. He will sort them into this diagram.

How might Jenson sort them this time?
What will the titles of each section be?

shapes **that have fewer than 6 vertices**	shapes **that have more than 6 vertices**
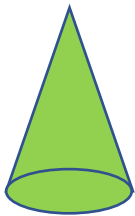
To sort 3-D shapes

Activity 3: Some 3-D shapes and real objects have been sorted into this Venn diagram.
Which shape is in the wrong place? Why?

orange shapes

TOBLERONE

shapes with a curved surface

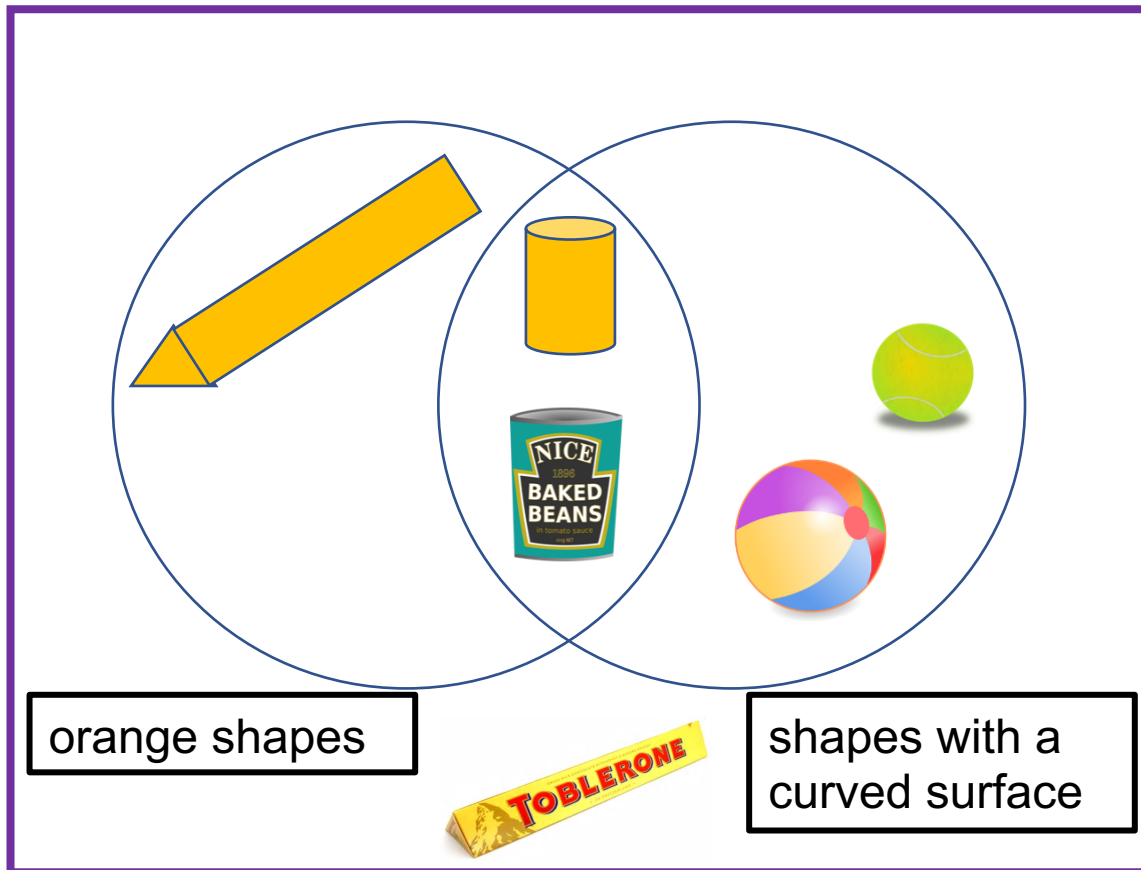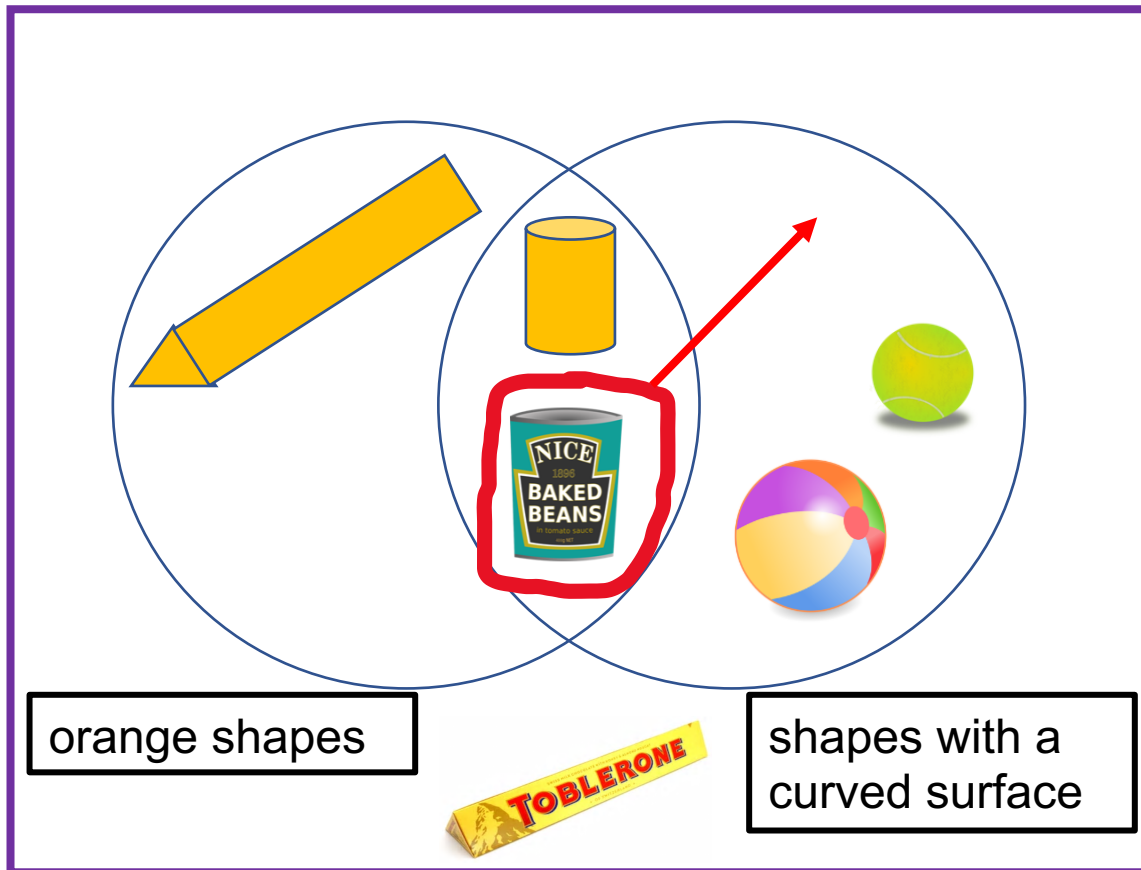# To sort 3-D shapes

Activity 3: Some 3-D shapes and real objects have been
sorted into this Venn diagram.
Which shape is in the wrong place? Why?

orange shapes

shapes with a curved surface

The baked beans tin should be in the shapes with a curved surface section.
It is not orange, so it does not go in the centre with the other cylinder.

To sort 3-D shapes

Evaluation: Here is a collection of 3-D shapes.
Can you decide how you might sort them all into the sorting
diagram?
Can you write your labels?
Is there a different way of sorting the same shapes?

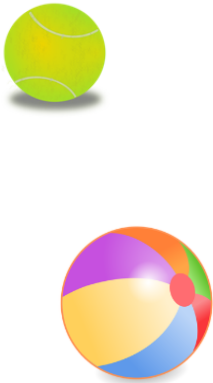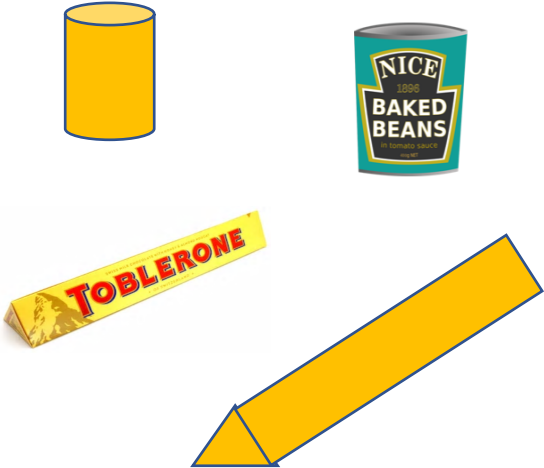| shapes that	shapes that

To sort 3-D shapes

Evaluation: Here is a collection of 3-D shapes.
Can you decide how you might sort them all into the sorting diagram?
Can you write your labels?
Is there a different way of sorting the same shapes?

shapes that **have no edges**	shapes that **have edges**

Success Criteria:

❑ I can sort 3D shapes into different groups
❑ I can label real life objects as 3D shapes

Do you have a group of pupils who need a boost in maths this term?

Each pupil could receive a personalised lesson every week from our specialist 1-to-1 maths tutors.

- Raise attainment
- Plug any gaps or misconceptions
- Boost confidence

Speak to us:

thirdspacelearning.com

0203 771 0095

hello@thirdspacelearning.com

THIRD SPACE LEARNING