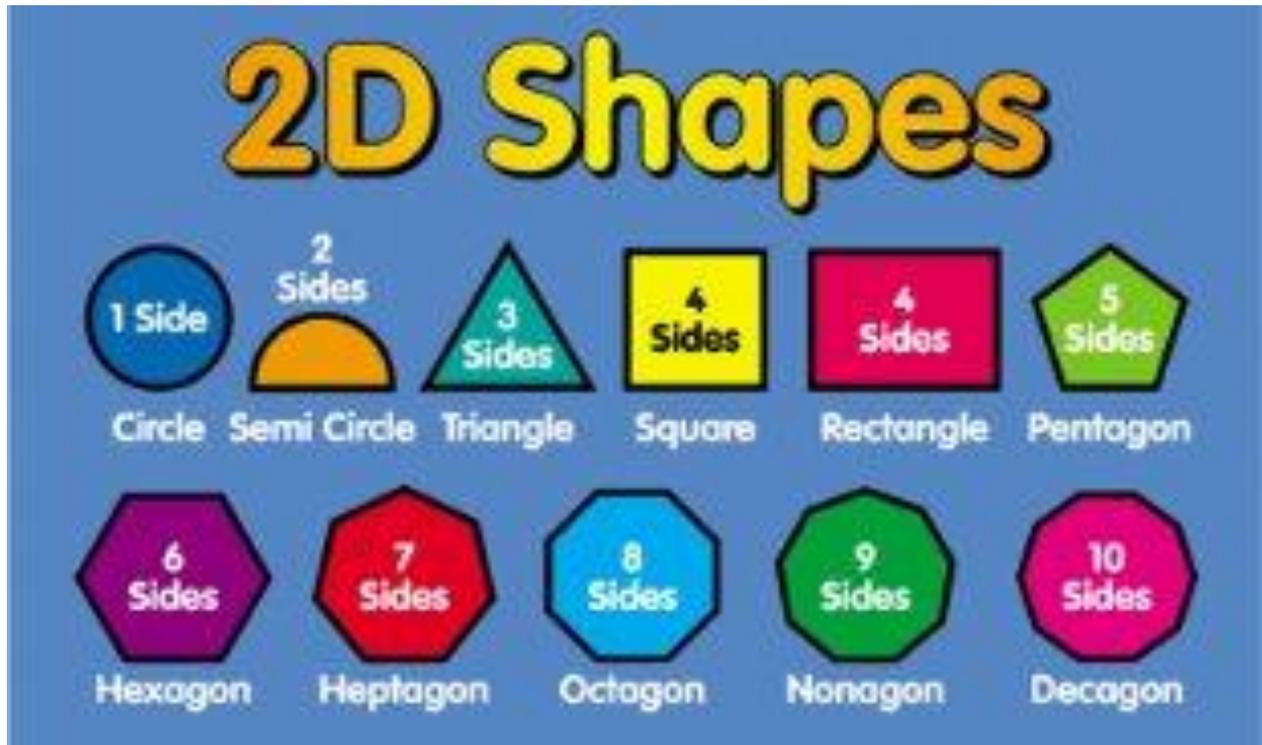


How We Teach Shape, Space and Measure

Wheatfields Infants' and
Nursery School

2D Shapes



Shape Spotting

The children should be able to spot shapes wherever they go. For example bricks look like rectangles and road signs are triangles. You could go on a shape hunt as you are walking to school.

Describing 2D Shapes

We ask the children to name the shape from the description and describe it themselves for somebody else to guess.

The children are taught to describe the shapes by saying:

- How many sides
- How many corners
- Curved or straight sides

For example: Play 'What Am I?'

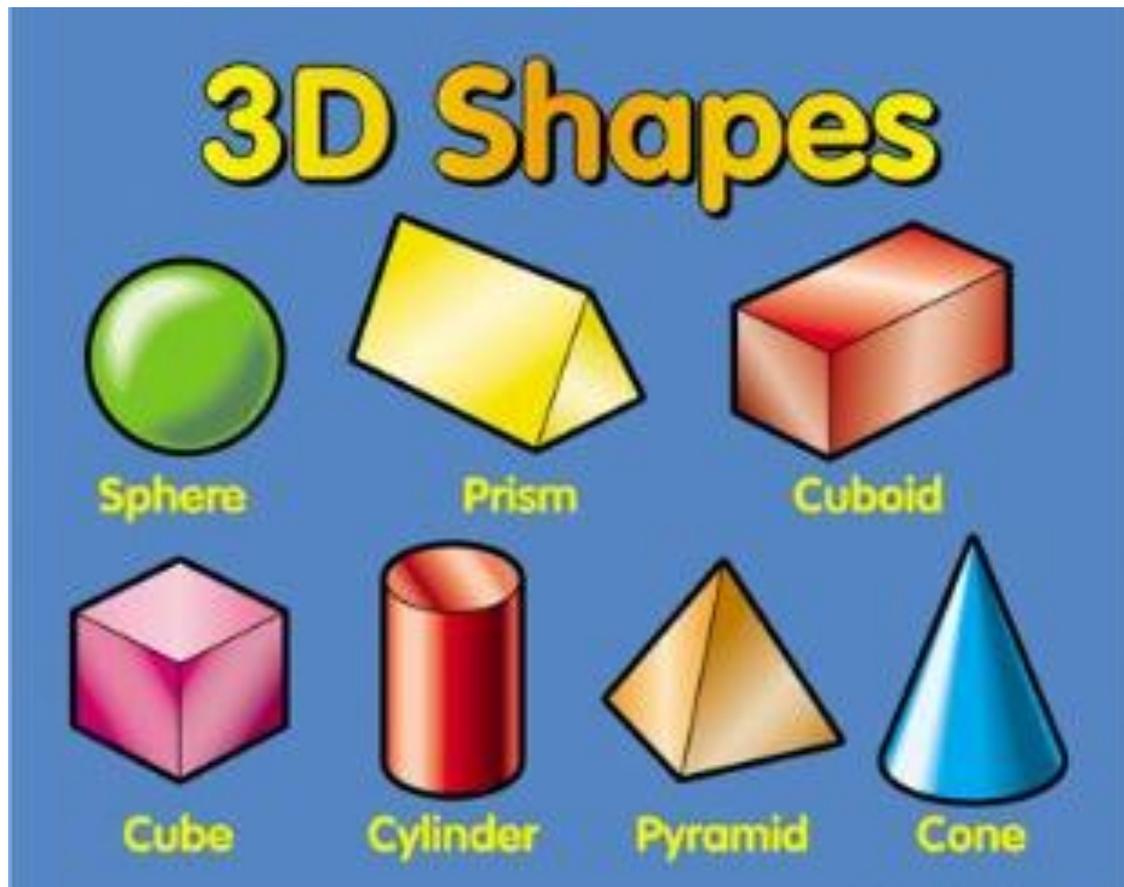
I have 3 sides and 3 corners, my sides are all straight (Triangle)

I have 2 sides and 2 corners. One of my sides is curved and one is straight (Semi-Circle)

I have 4 sides and 4 corners. All of my sides are the same length. (Square)

I have 4 sides and 4 corners. I have 2 long sides and 2 shorter sides. (Rectangle)

3D Shapes



Shape

Spotting

The children should be able to spot shapes wherever they go. For example balls are spheres, toilet rolls are cylinders and toblerone packets are triangular prisms. You could go on a shape hunt in the supermarket.

Describing 3D Shapes

We ask the children to name the shape from the description and describe it themselves for somebody else to guess.

The children are taught to describe the shapes by saying:

- How many faces - flat or curved
- How many edges - straight or curved
- How many vertices (points where the edges meet)

For example: Play 'What Am I?'

I have 6 faces, 12 edges and 8 vertices. My faces are all flat. All of my faces are the shape of a square. (Cube)

I have 3 faces, 2 edges and no vertices. 2 of my faces are flat and one is curved. (Cylinder)

I have one curved face, no edges and no vertices. (Sphere)

Positional Language

The children are taught the following vocabulary to describe where things are.

under, on top of, behind, in front of,
above, below, in, outside, next to

You can practise this using any picture book or by playing 'hunt the teddy' games.

For example:

Where is the bird?

Or

The teddy is hiding *in* the box which is *next to* the cupboard. Can you find him?



We also teach them vocabulary to give and follow directions:

forwards, backwards, turn around

left, right

clockwise, anti-clockwise

full turns, half turns, quarter turns

You can practise this by playing treasure hunts. E.g. To find the treasure walk forward 3 steps, quarter turn clockwise, go backwards 2 steps, turn around and then you will see it!

Or you can use remote control toys and give directions for them to follow.

Time

We teach the children an awareness of time by:

- Ordering events of the day, ordering events in a story
- Playing 'How much can you do in a minute?' (E.g. How many jumps in 1 minute?)
- Playing with and using sand timers
- Talking about the day, date and seasons

Vocabulary

The children need to know and use the following time related vocabulary:

- First, Next, Then
- Days of the week; Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.
- Months of the year; January, February, March, April, May, June, July, August, September, October, November, December.
- Seasons; Spring, Summer, Autumn, Winter.
- Second, Minute, Hour.
- Morning, afternoon, evening.

Using a Clock

Remember the clock face is very complicated and each number can mean many different things. For example the 3 can mean quarter past, fifteen, or three. It can take children a long time to learn to tell the time.

O'clock - Minute hand (big) on the 12, hour hand (little) on the name of the hour

Half Past - Minute hand on the 6, hour hand *half way* past the name of the hour

Quarter past - Minute hand on the 3, hour hand *just past* the name of the hour

Quarter to - Minute hand on the 9, hour hand *just before* the name of the hour

Word Problems

It is 2 o'clock now and at 3 o'clock it will be home time. How long until home time?

It is half past 2. How long until it is 3 o'clock?

The train takes an hour and a half. It is half past ten now. What time will we arrive?

Non- Standard Measures

The first step in measuring is to be able to compare amounts and use the vocabulary of comparison. Can they find objects that are:

- Bigger / smaller than
- Longer / Shorter than
- Heavier /lighter than
- Containers that hold more/ less than

The children need to be able to measure using non-standard measures before they will be able to use measuring equipment accurately. For example:

- How many footsteps to cross the garden?
- How many cubes tall is the table?
- How many lego bricks wide is the box?
- How many cups of water fill the jug?
- How many pasta shapes weigh the same as an apple?

When measuring length remember to:

- Line up the ends carefully
- Make sure you don't leave any gaps
- Count carefully

When measuring weight (you need balancing scales to do this!) Remember to:

- Check the scales aren't caught on anything
- Put the object to be weighed in one side of the scales
- Fill the other side of the scales until the scales balance
- Don't touch the scales!

When measuring capacity remember to:

- Fill the cup to the top
- Pour carefully - try not to spill any
- Count how many full cups you use to fill the container

Standard Measures

Reading Scales

The children are taught to read numbers on a scale beginning with marked scales and then looking at and interpreting the divisions on a scale; for example this scale reads 750g.



Length

We use metres, centimetres and millimetres. The children are taught to use a ruler, tape measures and trundle wheels. Remember to line up zero on the ruler with the end of the thing you are measuring and don't move it until you have read the scale.

Weight

We measure in grams and kilograms. The children are taught to use balancing scales, analogue and digital scales. Remember to make sure nothing else is on, or touching, the scales.

Capacity

We measure in litres and millilitres. The children are taught to use lots of different shapes and sizes of measuring jugs. Remember to make sure the jug is still, on a flat surface, and the liquid is not moving when you read the scale.

Ways to practise at home

Baking! Loads of opportunity to use measuring jugs and scales

Who can jump the furthest? How can we measure the jumps?

Can you improve how far you can jump? Lets measure now and then practise and see if we can jump further.

Can you draw a square that has 4cm long sides?

Sorting, Venn and Carroll Diagrams

Sorting

The children are taught to sort objects into groups. They can be anything in any groups but they need to talk about how they are sorting them and why. For example:

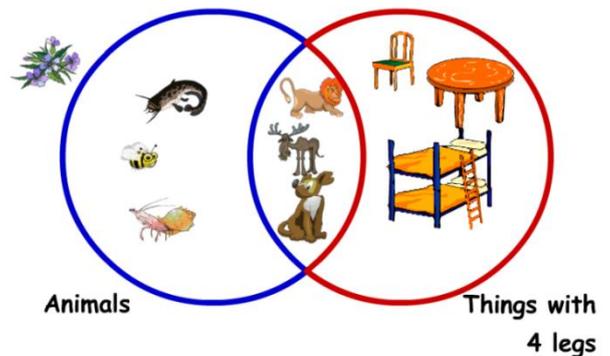
I sorted them into animals that live on land and animals that live in the water.

I sorted them by colour.

I sorted the socks into Mummy's socks, Daddy's socks and my socks.

Venn Diagrams

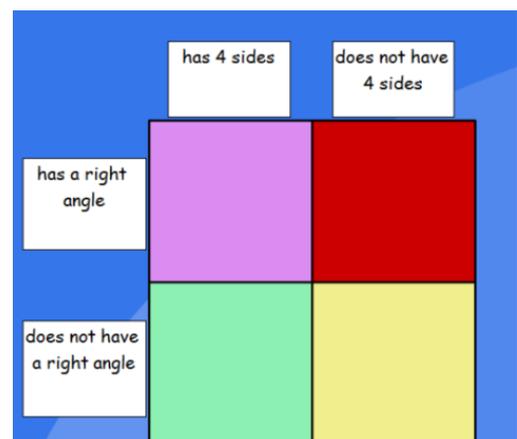
Show two groups that overlap for example animals and things with 4 legs. Remember that anything which doesn't fit in either group should be placed outside of the hoops. You can make these with hula-hoops! The children are taught how to sort objects into prepared Venn diagrams and then how to create their own and choose the group names.



Carroll Diagrams

These are used to sort 4 groups that overlap. The groups have to be carefully named to ensure all objects fit into one of the boxes by using 'not' For example 'has 4 sides / does not have 4 sides' or 'lives on land / does not live on land' .

The children are taught how the diagram works and how to sort objects into it and then how to create their own diagrams, choose their own objects to sort and choose their own names for each group.



Pictograms and Block Graphs

Collecting Data

We teach the children to collect data by asking questions and recording the answers; they use numbers and tally charts.

Presenting Data

We use ICT programs to create class graphs and the children are also taught to draw pictograms and block graphs. They need to be able to use a ruler to draw a straight line before attempting this!

Analysing Data

The children are taught how to read from graphs and to answer questions about the data.

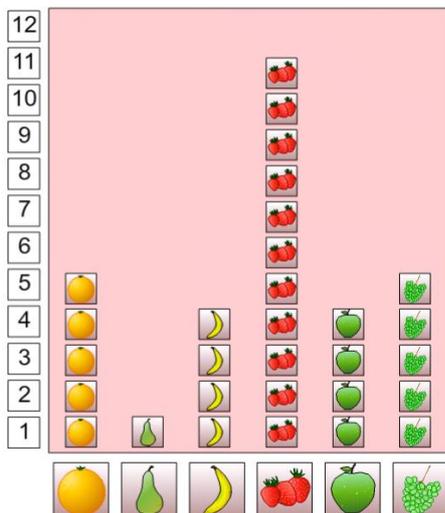
How many people chose strawberries?

What was the most popular answer?

What was the least popular answer?

How many more people chose oranges than pears?

Pictogram



Block Graph

