Maths Knowledge Organiser

Vocabulary

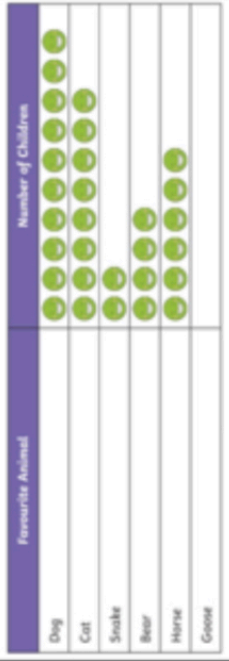| Key Word	Definition
2D shape	2D shapes have sides and corners and are completely flat.
3D shape	3D shaped have faces (sides), edges and vertices (corners).
vertices	a corner where edges meet
edge	the side of a shape
face	a flat or curved surface
line of symmetry	a line that cuts exactly a shape in half

Table

A table is used to record information and collect results. The information can then be used to make pictograms or block diagrams to display results clearly. A table needs to have headings to show what you are measuring or recording.

Favourite Animal	Number of Children
Dog	10
Cat	8
Snake	2
Bear	4
Horse	6
Goose	

Pictogram

A pictogram uses pictures to represent data. It is quicker and easier to interpret the results in a pictogram than in a table or tally chart.

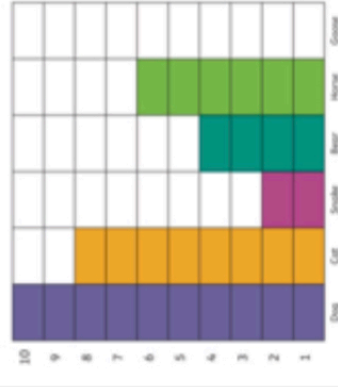| Favourite Animal	Number of Children
Dog	
Cat	
Snake	
Bear	
Horse	
Goose	

Tally Chart

A tally chart is used for counting how many of something you are recording. 1 tally mark shows you that there is 1 item. 4 tally marks with a diagonal line through it shows you that there are 5 items. In this example, the tally marks show how many children chose each of the animals as their favourite in a survey. Making a tally chart is faster than writing out words or numbers.

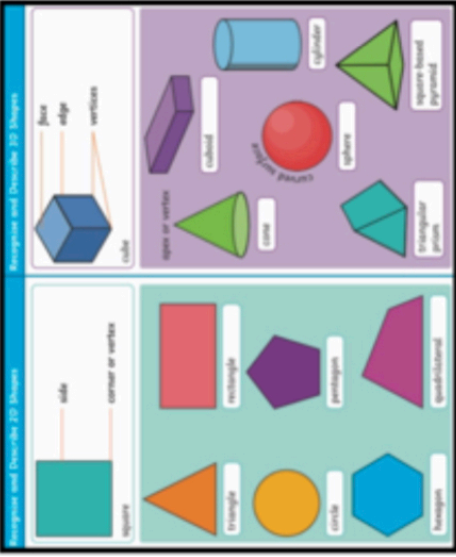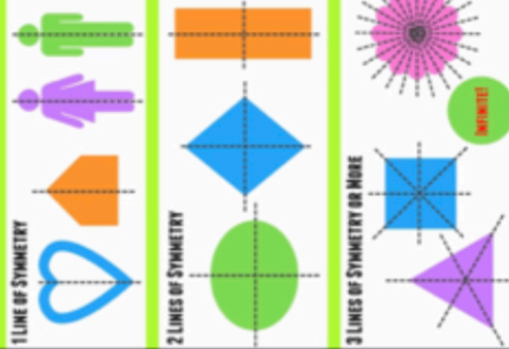| Favourite Animal	Number of Children
Dog	卌 卌
Cat	卌 III
Snake	II
Bear	IIII
Horse	卌 I
Goose	

Block Diagram

A block diagram is used to clearly display results and information.

Types of items are shown on the x-axis, which is horizontal.

The number of items are shown on the y-axis, which is vertical.

One block represents one item. It is quicker to compare results using a block diagram than a table or tally chart.

LINES OF SYMMETRY

1 LINE OF SYMMETRY
2 LINES OF SYMMETRY
3 LINES OF SYMMETRY OR MORE

INFINITE!

2D Shapes

Name		Sides	Vertices
triangle		3	3
circle		1	0
square		4	4
rectangle		4	4
pentagon		5	5
hexagon		6	6
oval		1	0
rhombus		4	4
trapezium		4	4
parallelogram		4	4

We see...

Name		We see...
cube		6 flat surfaces, 12 edges, 8 vertices, all edges are the same
cuboid		6 flat surfaces, 12 edges, 8 vertices, not all edges are the same
square-based pyramid		5 flat surfaces, 8 edges, 5 vertices, 4 triangular faces, a square base, a sharp point
sphere		perfectly round, no edges, no vertices
cylinder		2 flat surfaces, 1 curved surface, 2 curved edges
cone		1 flat surface, 1 curved surface, 1 curved edge, a point

Recognise and Describe 2D Shapes

side
corner or vertex
square
rectangle
pentagon
quadrilateral
triangle
circle
hexagon

Recognise and Describe 3D Shapes

face
edge
vertices
cube
cylinder
square based pyramid
cuboid
sphere
cone
triangular prism