Pupils should be taught to:	As outcomes, Year 1 pupils should, for example:
Solve a given problem by collecting, sorting and organising information in simple ways	Understand and use in practical contexts: *sort*, *set*, *list*, *count…*

Make and organise a **list**, such as:

- all the counting numbers between 14 and 23;
- all the days of the week;
- first names with six letters.

Solve problems such as:
How many cubes can you hold in your hand?

Discuss questions such as:
- How can we find out?
- How shall we organise the information?

Collect data quickly and make and organise a **table**.

Name	Cubes
Mary	8
James	7
Lisa	5
Mark	6

Respond to oral questions such as:
- Who can hold the most cubes?
- Who can hold one more cube than Mark?
- How many more cubes can Mary hold than Lisa?

As outcomes, Year 2 pupils should, for example:	As outcomes, Year 3 pupils should, for example:

Understand, use and begin to read:
sort, set, represent, graph, table, list, count, label...
most/least common or popular...

Use, read and begin to write:
sort, set, represent, graph, chart, pictogram, diagram,
table, list, count, tally, axis, label, title...
most/least common or popular...

Classify numbers and organise them in lists and simple tables. For example, make a list of:

• all the multiples of 10 between 0 and 100;
• five different numbers that are more than 70;
• all the odd numbers from 15 to 35.

Classify objects, numbers or shapes according to one criterion, progressing to two criteria, and display on a **Carroll or Venn diagram**. Examples might include:

• children who are 8 years old or not 8 years old…
• shapes that are squares or not squares…

Multiples of 5 up to 50	
even	not even

Shapes

Discuss questions about the properties of the sorted items such as:
• Why is this shape a square?
• Why is this rectangle not a square?

Solve a problem such as:
Are names with five letters the most popular?

Respond to questions such as:
• How can we find out?
• What information should we collect?
• How shall we organise it?

Solve a problem such as:
What is our favourite… sport, comic, TV show, colour...?

Respond to questions such as:
• How can we find out?
• What information should we collect, and how?
• How shall we organise it?

Collect data quickly (for example, by holding up a digit card corresponding to the number of letters in your name) and make a simple **table.**

Collect data quickly (for example, by voting in a show of hands) and make a simple **frequency table.**

Our names

3 letters	4 letters	5 letters	6 letters
Ann Sam Ali	Kate Ajit Tara Mark	Halim David Jyoti	Pritam Sophie

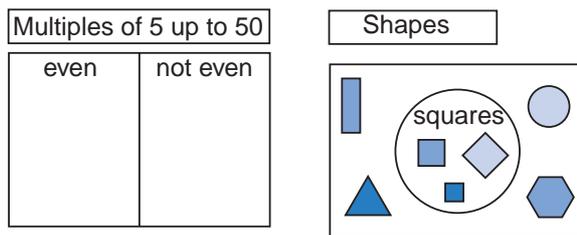| Favourite colours	Votes
blue	6
green	4
pink	8
red	7

Discuss the outcomes. Respond orally to questions like:
• What is the most common number of letters in a name?
• How many names have more than 5 letters?
• How many names have fewer than 5 letters?

Discuss the outcomes. Respond to questions like:
• Which is the most/least popular?
• Who voted **either** for this **or** for this?
• Which colour had fewer than 5 votes?
• Would the table be the same if we asked Year 6?
• How might the table change if everyone had 2 votes?
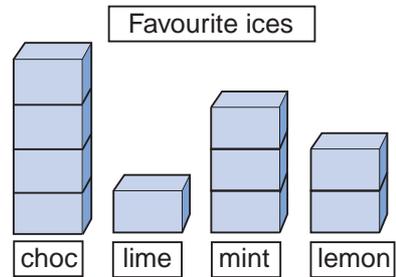• Who might find it useful to know what colours children like?

Pupils should be taught to:	As outcomes, Year 1 pupils should, for example:

Solve a given problem by collecting, sorting and organising information in simple ways (continued)

Solve a simple problem such as finding out children's likes or dislikes. Collect information quickly by voting or sorting, then represent it by drawing or placing objects or pictures. For example, use towers of bricks or linking cubes, placing a brick or cube on the correct tower:

Favourite ices

choc   lime   mint   lemon

Respond to questions such as:
• How many children did we ask?
• Which ice cream did children like best? How do you know?

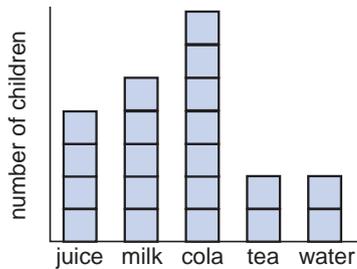| As outcomes, Year 2 pupils should, for example:	As outcomes, Year 3 pupils should, for example:

Solve a problem such as:
What do 6- and 7-year-olds like to drink?
Discuss:
• How can we find out?
• How shall we organise the information?
Make a simple **block graph**.

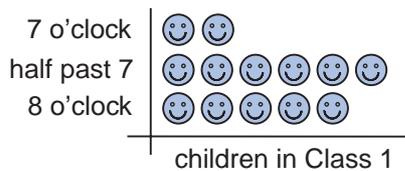**What we like to drink**

Discuss questions such as:
• What do most children like to drink?
  Why do you think this is?
  Who would find it useful to know?
• How many children did we ask?
• Would the information be different if we asked in the winter?

Test a hypothesis such as:
Children in our class are in bed by half past seven.

Collect data quickly (for example, by a show of hands) then make a simple **pictogram, where the symbol represents one unit**. For example:
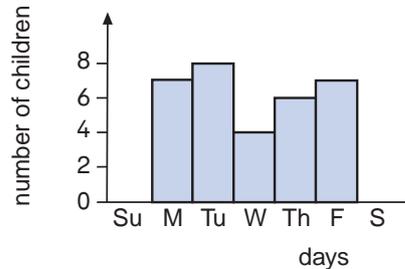
Our bed times

Discuss questions such as:
• How many children are in bed by half past seven?
• How many children go to bed at 8 o'clock?
• Are more children in bed by half past seven than after half past seven?
• How many children altogether in the class?

Use the data in a frequency table linked to a problem the class is trying to solve. Make – or use a computer to make – a simple **bar chart**, with the vertical axis labelled in ones, then twos. For example:

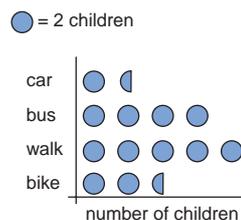**Packed lunches brought to school**

Discuss questions such as:
• Which day had most/least packed lunches?
• How many packed lunches in the whole week?
• Why do you think there are different numbers of packed lunches brought on different days?
• Would next week's graph of packed lunches be the same or different? Why?

Test a hypothesis such as:
We think that most children in our class walk to school.

Decide what data is needed, collect it quickly then make – or use a computer to make – a simple **pictogram, where the symbol represents 2 units**.

Ways of coming to school

Discuss questions such as:
• Do most children walk to school?
• More children walk than come by bike.
  How many more?
• How many children altogether in the class?
• How would the graph be different:
  if it were a wet day…? or December…?
  if there were no buses…?
  if we asked Year 6…?

Use a computer with a simple graphing program to enter and display data. Discuss how quickly the computer can do it and which chart, graph or table shows the information best.