

# Computing

## Grouping data and pictograms

### Overview

Data can include numbers, words, or pictures, while information is the meaning we gain from interpreting data. When these things are recorded it is data.

Objects can be identified by their names or described based on their properties.

Labels help group objects, making it easier to count, compare, and identify patterns by spotting similarities and differences.

Objects can be organised into groups, based on what they are or their properties (features).

Data about different groups can be recorded and presented by using pictograms, tally charts and block charts. This data can answer questions and solve problems.

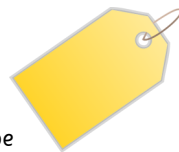
### Labels and properties

Labels are the names that we give to things so that we can easily identify them.

Objects have different properties (features) that we can choose to label them by. For example: size, colour and shape

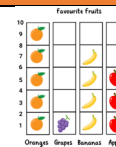
Objects can be described by their name labels and their properties.

Computers can use our labels to sort objects by properties.



### Pictograms and block diagrams

Pictograms use pictures to represent data. They can be created by hand or using a computer.



Block Charts work similarly to pictograms, but each object is shown as a block instead of a picture.

#### Creating Charts with Technology

Computer programs like j2data can be used to make pictograms and block charts.

Clicking the + and – icons allows users to add or remove pictures from the diagram.



#### Using Data Effectively

Data should be collected for a clear purpose and presented in an easy-to-read way.

For example, pictograms can help someone decide which fruits to buy for a party or assist the school chef in ordering supplies.

Pictograms and block diagrams can also be used to answer questions and solve problems, such as:

Which colour was the most or least popular?

How many more people chose green than pink?

What is the total of apples and pears combined?

### Key Questions

What is data?

*Numbers, words or pictures that have been recorded.*

What is information?

*What we find out from looking at data.*

Give an example of a property.

*Size, colour, shape etc.*

How do computers use our labels?

*To sort objects by properties*

What kind of chart does this describe:

“They use pictures to describe and represent data.”

*A pictogram*

How is a block diagram different to a pictogram?

*It uses colour blocks instead of pictures to represent data*

How should data be presented?

*In an easy to read way*

Why should we only collect data when we have a clear purpose?

*Because it can be harmful if we lose people's data*

**Key Vocabulary** Same, Object, Properties, Value, More/less, Organise, Tally chart, Votes, Total, Pictogram, Enter, Compare, Count, Explain, Attribute, Difference, Most/least popular, Conclusion, Block diagram