BRINGING LIFE TO DATA: RESOURCES

DATA INVESTIGATION FRAMEWORK: RESOURCE FOR TEACHERS

**Formulate the question**

Start by asking ‘What do we want to find out?’

Invite students to pose a relevant question for the data investigation. A general question such as, ‘How much rubbish does our school generate’ may need to be refined to make the process of data collection easier. Discuss definitions - *What do we mean by ‘rubbish’?* and timelines - *Will we analyse the data over a day, a week, or a year?*

Appropriate questions for this topic may be:

* *What is in our waste?*
* *How much waste does our school produce in one day?*
* *Where is the waste coming from? (e.g., lunchboxes or the canteen)*
* *How much of our waste can be reused or recycled?*

**Collect the data**

Once students have posed an appropriate question, support them to devise a plan for answering it. Guide them by asking questions such as:

* What information will we collect?
* How will we collect the information? (Survey, questionnaire, observation)
* How much data do we need and why?
* What is the best time of day to collect the data?
* How will we record the information?

**Analyse the data**

Discuss how to analyse and represent the data.

* How might we sort and categorise the data we collected?
* What calculations need to be carried out to highlight the data?
* What types of graphs will display the data effectively?
* How can we describe the data using numbers and sentences?

Select appropriate graph types and use these to analyse and interpret the data.

Optional extension: Use spreadsheet software to represent the data digitally.

**Interpret the results**

Discuss the findings from the investigation. Draw conclusions based on the data and relate the interpretation to the original question. Questions might include:

* What information does the graph tell?
* How effectively does the graph communicate the findings of the data?
* What factual information can we tell from the graph?
* What inferences can we make that we can’t directly observe in the graph?
* What can you learn from this graph?
* What do you not know that you wish you knew?

© Department of Education and Training [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)