# Lesson 1: Collecting data

## Introduction

Learners will collect and organise data in a format of their choice. They will then explore how data can be structured in a table. Finally, they will input data into a spreadsheet.

## Learning objectives

To create a data set in a spreadsheet

* I can collect data
* I can suggest how to structure my data
* I can enter data into a spreadsheet

## Key vocabulary

Data, collecting, table, structure, spreadsheet

## Preparation

**Subject knowledge:**

It would be beneficial for teachers to have an understanding of a spreadsheet application, eg Google Sheets, or alternative software such as Microsoft Excel or ‘Purple Mash – 2Calculate’.

An understanding of the terms ‘data’, ‘data set’, and ‘data headings’ is also important, as they are key concepts throughout this lesson.

**Note:** The resources in this unit assume the use of Google Sheets.

**You will need:**

* Slides
* A1 – Dry wipe boards and pens or pens/pencils and paper
* A2 handout – Organising your data
* Access to a spreadsheet application

## Assessment opportunities

**Activity 1:** Assess learners’ ability to record data, without guidance.

**Activity 2:** Assess how effectively learners can organise their data into a given structure.

**Activity 3:** Assess how effectively learners can enter data into a spreadsheet.

## Outline plan

Please note that the slide deck labels the activities in the top right-hand corner to help you navigate the lesson.

*\*Timings are rough guides*

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| Starter activity (Slides 1–3)  5 mins | **Introduction**  Introduce the lesson and the learning objectives.  Show slide 3 and explain that in this lesson, learners will collect and organise data. Ask learners to suggest what data they could collect and how it could be organised. At this stage, responses will probably be wide and varied. However, the use of the word ‘spreadsheets’ may influence some responses. |
| **Activity 1**  (Slides 4–5)  10 mins | **Collecting data**  Show slide 4. Tell learners that they will roll a dice to generate their data. Explain that in their table groups (typically four to six learners), each learner will roll the dice five times and collect their scores. They should then collect the scores for the whole table and record them in the same place. Learners could use dry wipe boards or pens/pencils and paper.  Explain that the purpose of the exercise is to find out who on the table rolled the highest overall total.  Do not provide any guidance or suggestions, this is an opportunity for learners to decide for themselves how they will complete the task. In subsequent activities, you will model how they could complete the task effectively.  Show slide 5. Ask learners to reflect on how they recorded their data. |
| **Activity 2** (Slides 6–8)  10 mins | **Organising your data**  Show learners the blank table on slide 6. Ask them to suggest what they think the column headings (highlighted in blue) could be. After a short discussion, move on to slide 7 and explain that this is one way that learners could record their data.  Give out the activity sheet which has a template table and ask learners to organise their data on the sheet. There is an example of what this could look like on slide 8. |
| **Activity 3**  (Slides 9–10)  15 mins | **Recording your data on a computer**  Show slide 9. Ask learners what they could use to make a table on a computer. Depending on their prior experience, they may suggest word processing packages, such as MS Word or Google Docs; presentation tools, such as MS PowerPoint or Google Slides; or spreadsheet packages, such as MS Excel or Google Sheets. These are all valid answers. Build the slide to reveal (without explanation as to why) that in this case they will record their information in a spreadsheet.  Show slide 10 and explain that they need to copy the column headings from the table they completed in the previous activity and enter the data. To do this, they need to open a new spreadsheet in whichever application you have selected.  Because they are entering data that does not require any formatting, learners should not need much support for this activity, even if they have not previously used a spreadsheet application. |
| **Plenary**  (Slide 11)  5 mins | **Why use a spreadsheet?**  Ask learners to explain what they entered into their spreadsheets. They should identify that they entered column headings and numbers in the main part of the table.  **Note:** Some learners may differentiate between the individual rolls and the totals. They will learn how they can create totals using formulas in Lesson 3 of this unit.  Ask learners what else they think they could record in a spreadsheet. |
| **Next time**  (Slides 12–13)  5 mins | Review the ‘Assessment’ and ‘Summary’ slides. |

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