Data Handling

Data handling refers to the process of gathering, recording and analysing information. This information could be presented in graphs or charts. Read on to find out more.

Contents

- **What is data handling?**
- **Types of data handling**
- **Examples of data handling**
- **Data handling in the CAPS curriculum**
- **Data handling teaching resources**

What is data handling?

You might be wondering what data handling is. **Data handling** is also sometimes known as **Statistics**.

You will often come across it in the study of both **Maths** and **Science**.

Data handling is frequently considered an integral topic in **Statistics** and Maths.

Likewise, it's the procedure of gathering, listing and analysing information.

What is data handling in Maths?

Data handling is usually presented in **pie charts**, **line graphs**, **pictographs**, **bar graphs**, and **histograms**.

This is known as the **graphical representation of data**.

Data, that has been initially collected before it's been analysed is referred to as **raw data**.

Data handling is a popular method of presenting data that can then be analysed.

Furthermore, you can make choices and predictions based on the evidence that you have collected.

Additionally, it's a key part of the **Maths CAPS curriculum in South Africa**.

Teaching kids data handling can help them make sense of information and recognize patterns more easily.

While you're here, check out our **Grade 4 Data Handling Maths Worksheets**.

This data handling worksheet pack includes all of our fantastic data handling worksheets, including tally charts, bar charts, line graphs, frequency tables, and more.

This resource also gives a clear explanation for the question “what is data handling in Maths”!

Importance of data handling in Maths

Data handling is a crucial aspect of Mathematics as it allows learners to collect, organise, and analyse data to get valuable insights and results.

The importance of data handling in Maths includes:

1. Data handling helps learners connect theoretical concepts to real-life situations, making maths more relatable, relevant, and interesting.
2. Handling data is a great way to develop learners’ critical thinking skills, as they would need to evaluate, interpret, and draw conclusions from the data.
3. Data handling is also a great way to get learners to tap into their creative and visualisation skills as they would need to create graphs and charts to present their data.
4. Data handling introduces learners to statistical concepts such as mean, median, and mode when analysing and assessing data.
5. Data handling is also a great way to enhance learners digital literacy as they work with digital tools and softwares.

For a comprehensive resource to kick start your data handling classroom teaching lessons, download our **Data Handling Tally Charts Worksheets and Bar Charts Sheets**.

This resource is great as it helps your learners learn how to draw tally charts and how to read and analyse them too.

How to do data handling in Maths?

Purpose

The first step on how to do data handling in Maths is to identify the problem or purpose of conducting your research.

Collection of data

Once you have identified the purpose, you can then begin to collect all the data needed.

Presentation of data

All the data that has been collected should be presented in a manner that is easily understandable.

Graphical representation of data

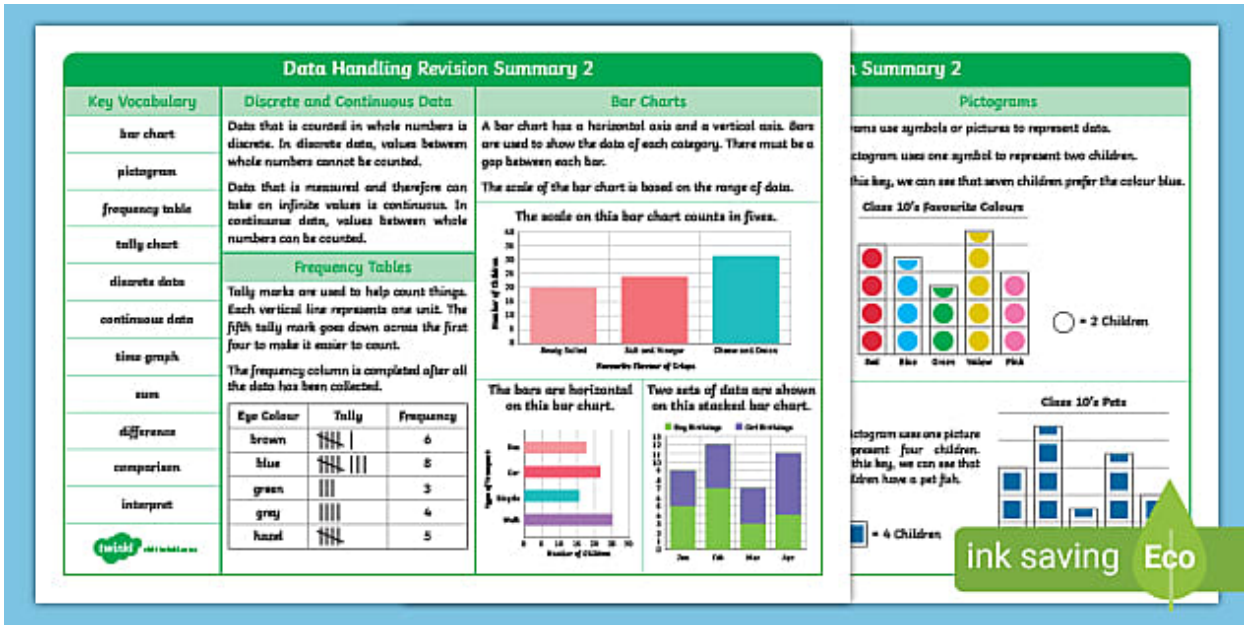
The collected and stored data can then be transferred to visual graphs or charts to make analysis and understanding easier.

Analysing the data

Analysing the data is the final step on how to do data handling in Maths. Once the visual graphs and charts have been completed, the data can then be analysed, and you should be able to get meaningful information from it.

Conclusion

Solutions to the problem and the purpose of the research should be concluded from the analysis of the data if the process was successful.



Types of data handling in Maths

There are two types of data handling in Maths. These are:

- Quantitative data
- Qualitative data

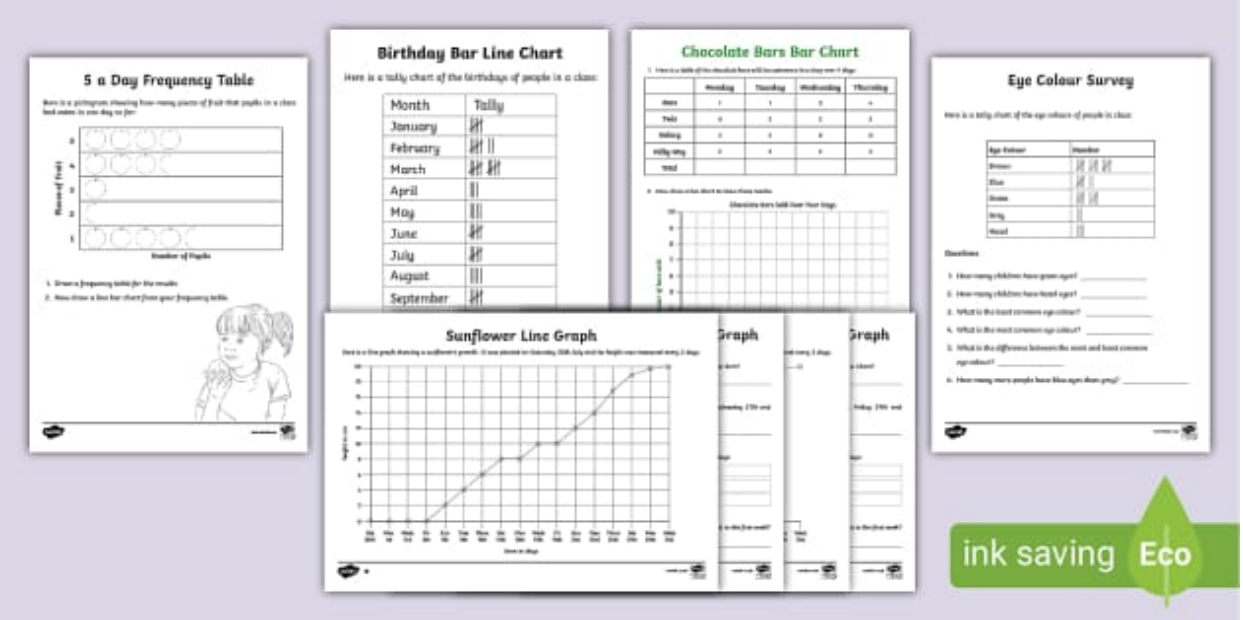
Quantitative data is data that can be measured or added in **numerical values**.

This type of data in Maths can be examined with maths techniques as the **data is quantifiable**.

Likewise, researchers can make real-life decisions based on this data.

Examples of quantitative data could include:

- Age in months or years
- Weight in pounds and kilograms
- Time in days or weeks
- Results from an experiment
- Distance in kilometres or miles



Quantitative data can be quick and easy to collect. However, this type of data handling in Maths can lack context.

You might need more insight from the data.

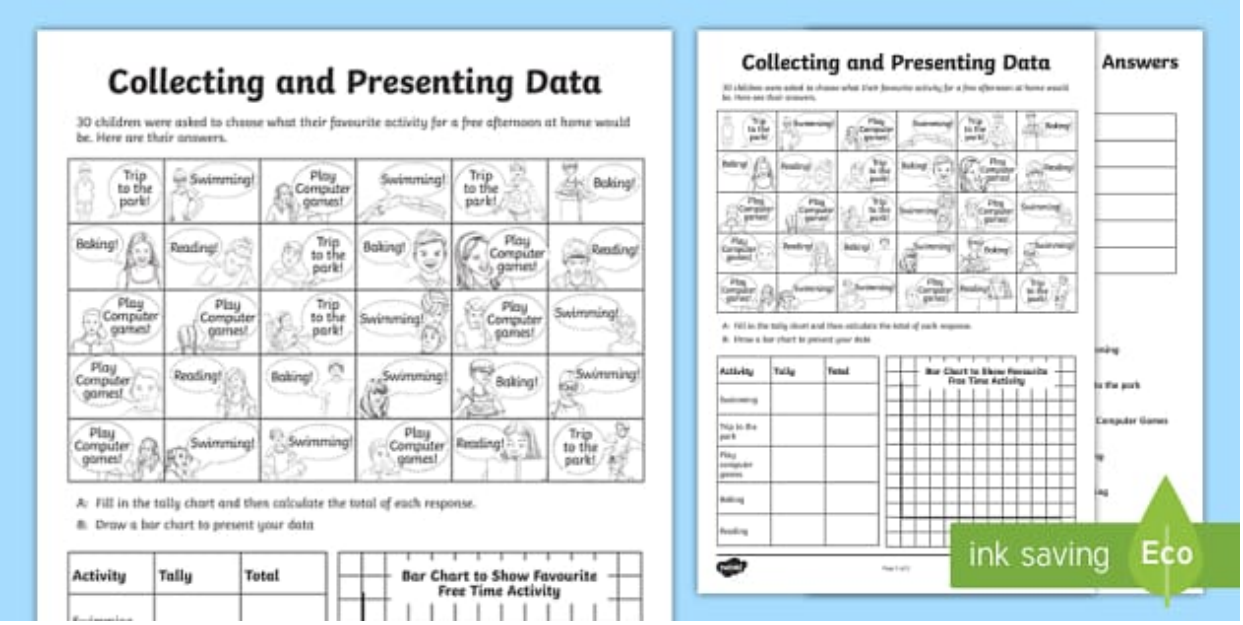
Qualitative data is a data method that gathers and examines non-numerical data. This form of data is not represented by numbers.

This is done to obtain a deeper understanding of a person's beliefs and motivations.

Likewise, qualitative data is often put together from focus groups, interviews, personal diaries, notebooks and photographs.

Examples of qualitative data could be:

- Interview transcripts
- Research and observation on a particular topic
- Focus groups
- Surveys, which can include online forums
- Case studies
- Audio and video recordings
- Examining photographs



Qualitative research can be time-consuming and there can be a lack of accuracy in the data that has been collected and analysed.

Although, qualitative data research can provide a detailed understating of a research participant's experience and perspectives.

Likewise, children will start to learn about data handling in the **Foundation Phase**.

In Grade 1, kids will be taught how to collect, and order data and how to represent data in **pictographs**.

In Grade 3, learners will learn how to analyse and interpret data from bar graphs.

Data handling is a set of skills. These include:

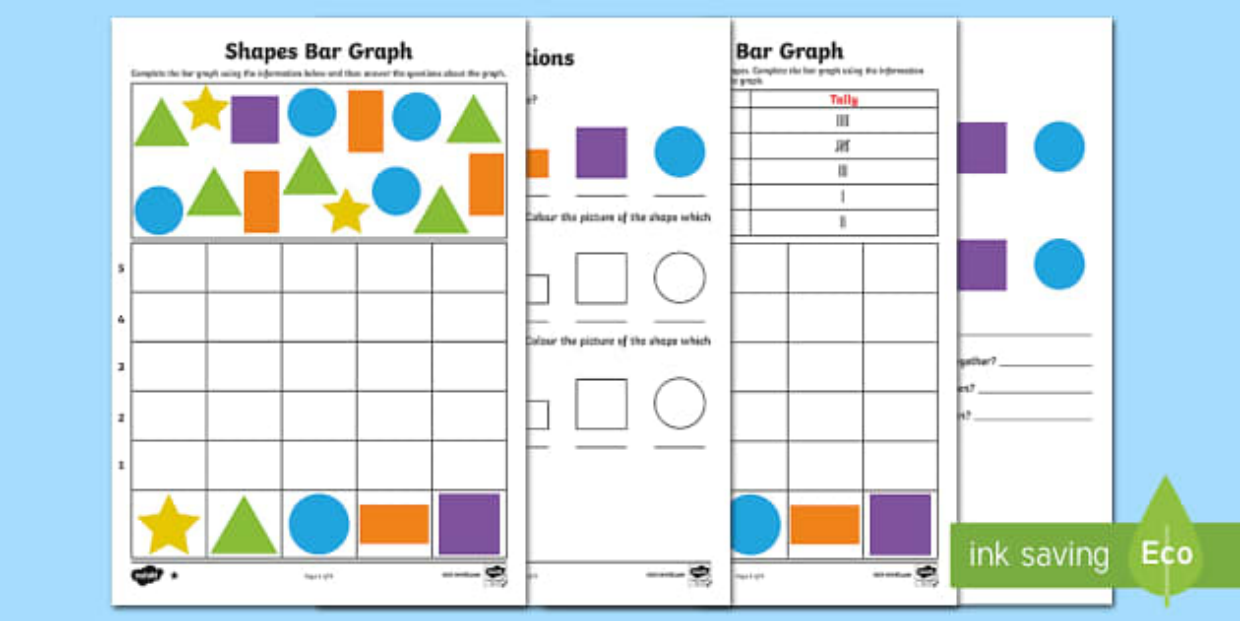
- Collecting data using a planned procedure.
- Recording data with precision and accuracy.
- Analysing data to conclude valid deductions.
- Sharing data in a way which is useful and can benefit others.

Examples of data handling

There are many examples of data handling which you will come across, both in the classroom and in real life.

Some school-related examples could be:

- Taking stock of the remaining buns after a school bake sale.
- Creating a tally chart of what colour eyes your classmates have.
- Drawing a pie chart to show how many boys and girls there are in a class.
- Making a bar chart to show different people's favourite colours.
- Creating a **block diagram** of the different kinds of cars at the school.
- Finding the mean, mode and median of a data set.



Moreover, to work out the **mean** of a number, you need to add up all the numbers in the data set.

Once, you have added up all the numbers, you then need to divide that total by the number of values you originally added.

Likewise, to find the **median** of a data set, you need to list all the numbers of a data set in numerical order.

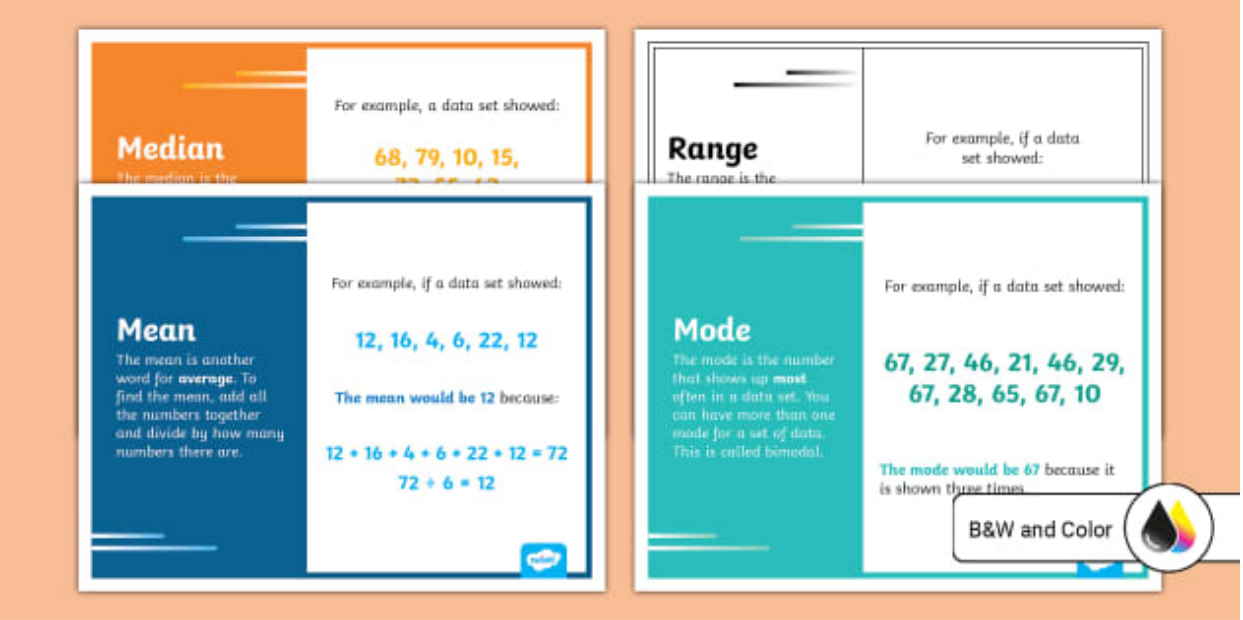
Numerical order is a way of arranging numbers.

You can order these numbers in **ascending** or **descending order**.

Once, you have set up the numbers in numerical order, you then need to identify when the number value is in the middle of the list.

To work out the **mode** of a data set, you need to pick out a number in the data set that occurs the most frequently.

Data handling might seem tricky at first but our teacher-made resources are here to guide you through this topic.



In addition, some real-life **types of data handling** could be:

- The National Census - Records and examines population information.
- Voter Polls - Votes in local elections are collected and interpreted.
- Online marketing surveys - Information from respondents is gathered, recorded and examined.
- Libraries - A detailed record of books is kept in library records.
- Weather reports - Meteorologists keep comprehensive reports on weather patterns and climate change.
- Medical reports - Doctors keep records of their patients. This can help doctors measure and examine their patient's health, quality of care and patient characteristics.

You might enjoy our **Data Handling Worksheets Pack**. This fantastic pack can help teach children how to interpret different forms of data.

Another great data handling resource is our - **Collecting And Presenting Data Worksheet**.

This worksheet is easy to use and easy to print.

This resource can help kids learn all about **statistical processes**. We've also included a memo for easy marking.

Data handling in the CAPS curriculum

You might be wondering - **what is data handling in Maths?** Data handling in Maths is taught as part of the Maths curriculum.

Learners will be taught all about this mathematical topic in Grade R.

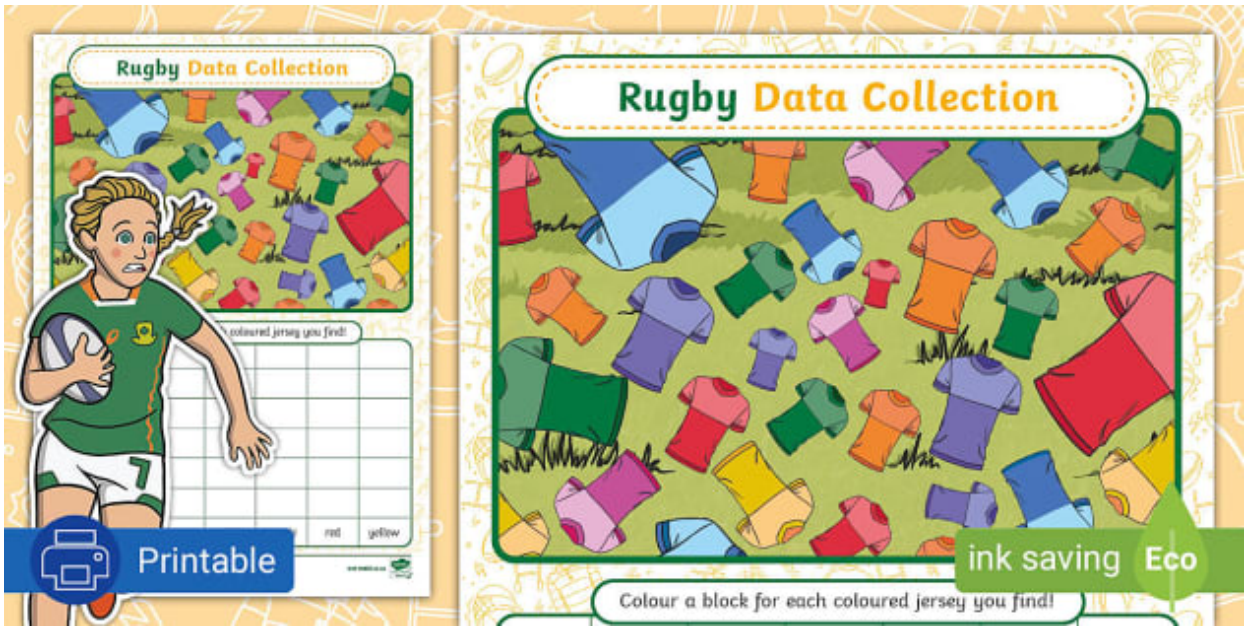
They will continue learning more in-depth aspects of data handling until the final year of high school.

Data handling in Maths is an important topic in the maths curriculum.

It's a key part of a kid's understanding of maths. Likewise, there are many benefits of teaching data handling to children.

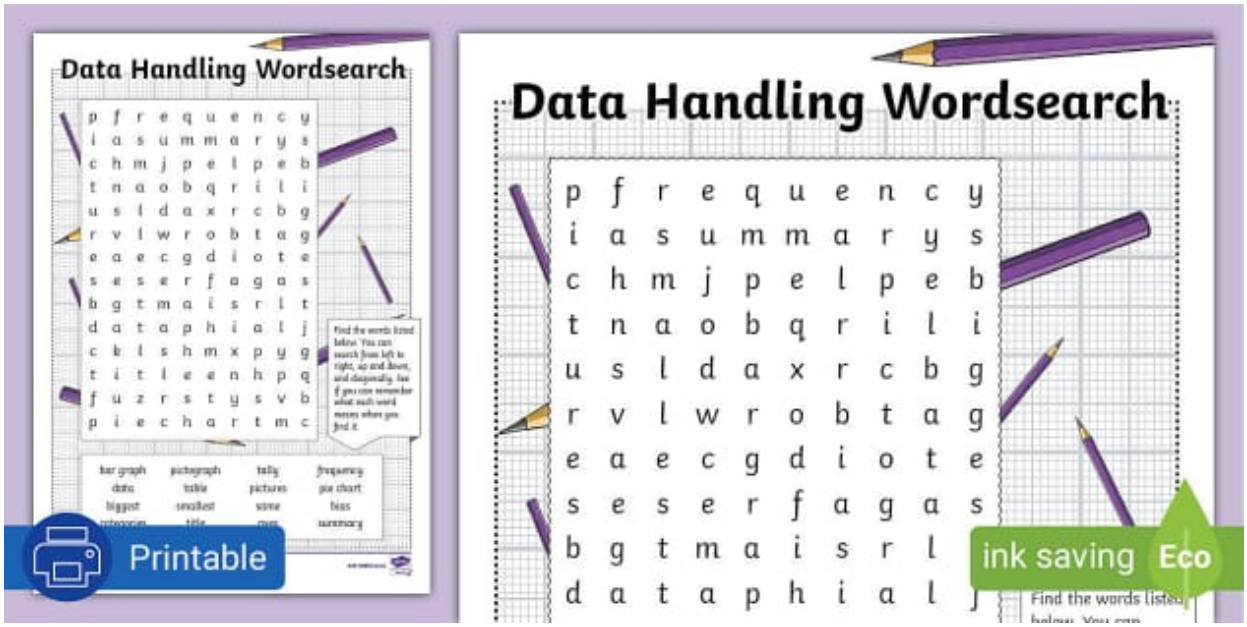
These benefits can help kids:

- Improve critical thinking skills
- Build problem-solving skills
- Identify patterns more efficiently



Additional data-handling resources that learners might like are listed below:

- **Rugby Data Handling Worksheet**: This comprehensive worksheet can help your learners explore data representation. The activity also celebrates Women's Day, which is on the 9th of August.
- **Data Handling Word Search Activity Sheet**: This fun activity can help your class remember the different terms and their definitions used in data handling. This is ideal for the **Intermediate Phase**.



In Grade R, children are expected to be able to collect and sort objects according to colour and type.

Kids will also be taught when they would need to collect and organise this information and how to use it.

You might enjoy our **Hard And Soft Materials Sorting Activity** or our **Day And Night Sorting Activity** which are ideal for the Foundation Phase.

These resources are available in different printing options to help you save ink when you print them.

Foundation Phase

Data handling in Maths in Grade 1 will see children begin to work on **Collecting And Organising Data**.

In our fantastic category page of **Grade 1 Maths**, you will be able to find many handy data-handling activities for your class.

Some of these activities involve **sorting** and **graph activities**.

Children will also be expected to be able to understand data in pictographs and analyse and interpret data by answering questions about it.

Intermediate Phase

In the Intermediate Phase, **Data Handling** is split into 4 sub-categories:

- Collecting and organising data
- Interpreting data
- Reporting data
- Representing data

In the **Intermediate Phase**, children will progress to collecting and organising data using tally marks and simple questionnaires.

They will also be expected to order data from the smallest group to the largest group.

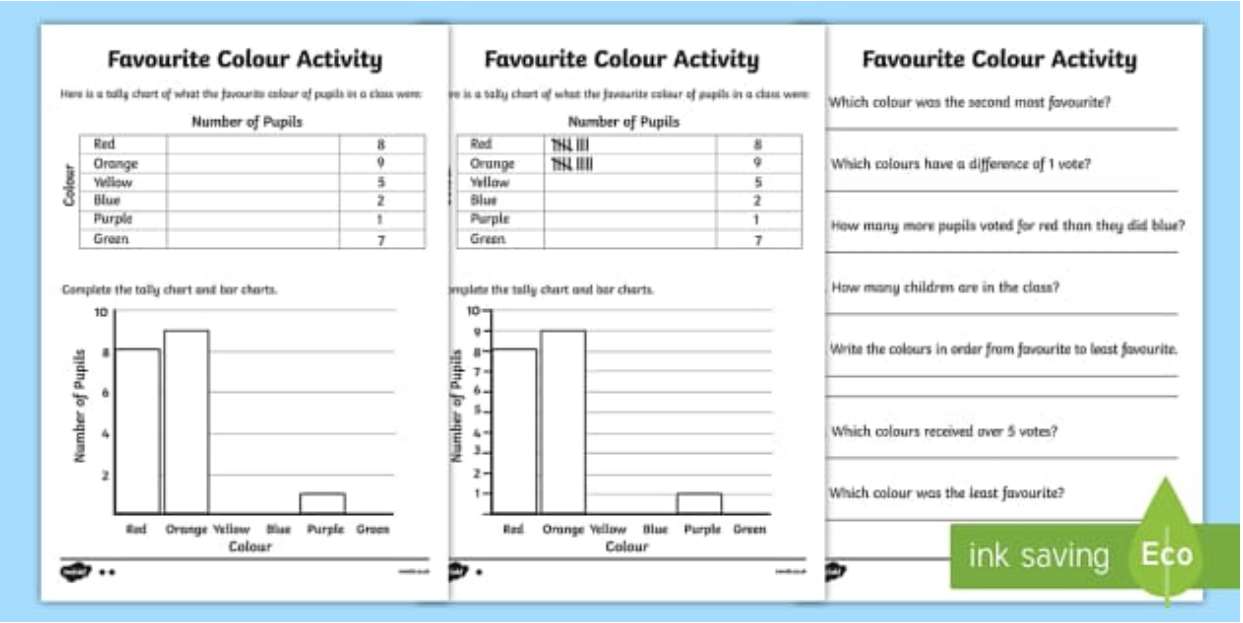
Additionally, learners will be taught how to draw graphs to display and interpret data.

There will also be a larger focus on analysing, interpreting and reporting data in the Intermediate Phase.

Children will be expected to be able to summarise data verbally and conclude an answer from the data.

During the Intermediate Phase, children are also introduced to **probability**.

Check out our teaching wiki on, **Probability**.



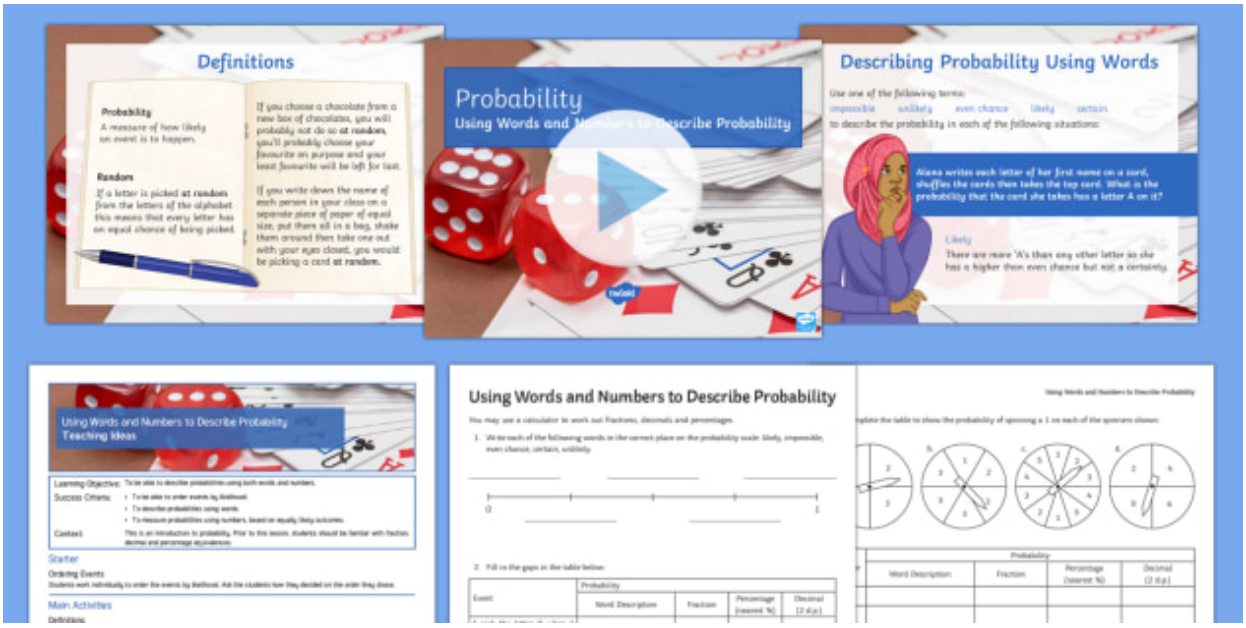
Senior Phase

Data handling in the **Senior Phase** will be more complex. Learners will be taught probability in more detail.

Probability is an area of Mathematics that deals with the occurrence of an unplanned event.

Children will learn more about these Maths concepts in statistics.

If you're enjoying this teaching wiki and want to explore more Maths content, you might enjoy our resource, **Statistics Worksheet**.



Data handling teaching resources

There are so many ways to teach your class to practise and use their data-handling skills.

You could teach your class about the many different ways they can present data with our resources.

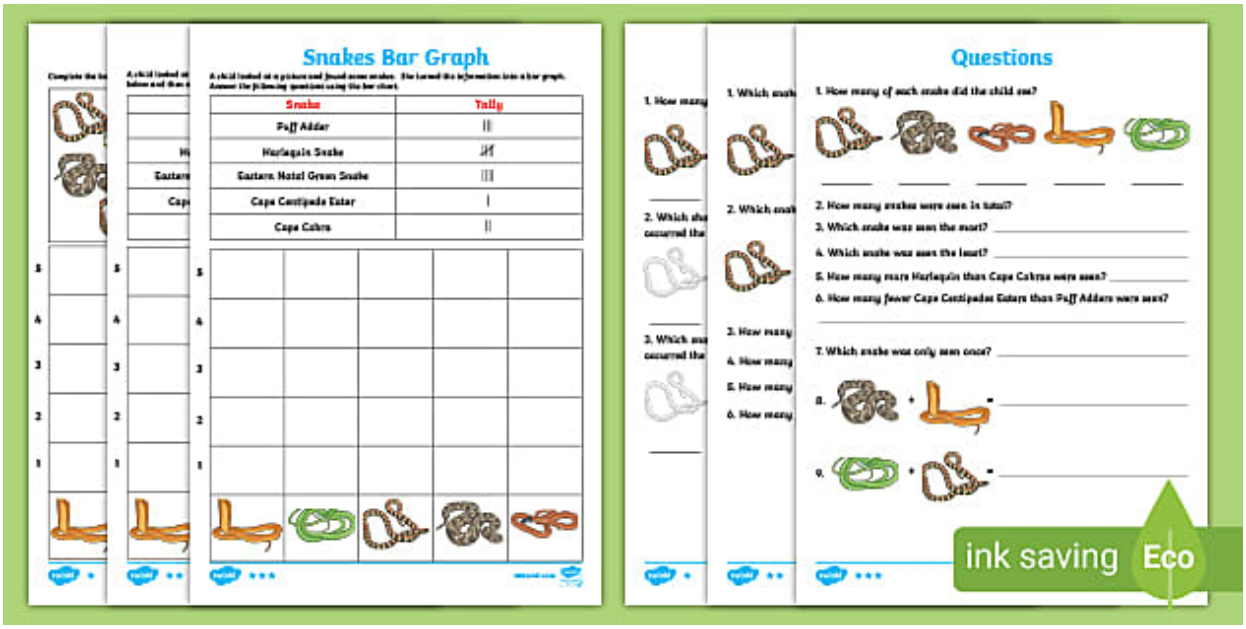
Check out our PowerPoint presentation, **Type Of Graph Or Chart PowerPoint**.

This handy illustrated PowerPoint presentation covers all the vital ways of conveying information to your class.

You may like to try these **Data Handling Challenge Cards** with your Intermediate Phase class.

This fun task can be completed in pairs or even in small groups.

They will need to interpret the data and find the answers to the questions with the information they have.



For a more immersive classroom activity, you could also use our **Titanic Lifeboats Data Handling Activity Pack**.

This history-based resource includes several fun and engaging activities.

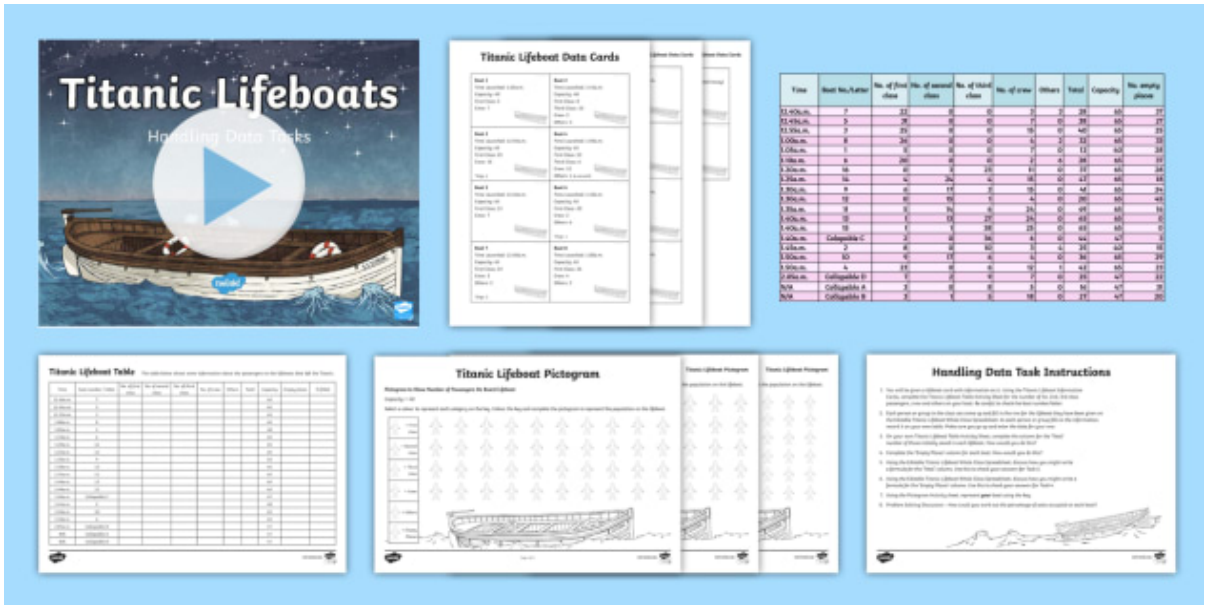
These activities include tables, spreadsheets and even a PowerPoint presentation about how to approach data-handling tasks.

If you've enjoyed this teaching wiki and you want to explore more of our resources on data handling, you might like our **Data Handling Revision Summary**.

This is available in alternative printing versions to help you save ink.

It's also ideal for the Intermediate Phase.

You might also like our fun worksheet, **South African Snake Data Handling**. This is ideal for the Foundation Phase.


Titanic Lifeboats
Handling Data Tasks
Titanic Lifeboat Data Cards
Titanic Lifeboat Table
Titanic Lifeboat Pictogram
Handling Data Task Instructions