

Week Six

PRESENT YOUR RESEARCH

ANALYSE YOUR RESULTS

Now you've collected your data, it's time to analyse it! It can be quite difficult to see what the results of your research are by looking at tables. How can you make it easier to understand your data? If you've repeated experiments multiple times, then you might want to think about calculating averages or percentages.

Graphs can be really useful to present your results in a visual way. Different types of graphs will suit different types of experiments - have a look at the examples below to see which one would be useful for your research!

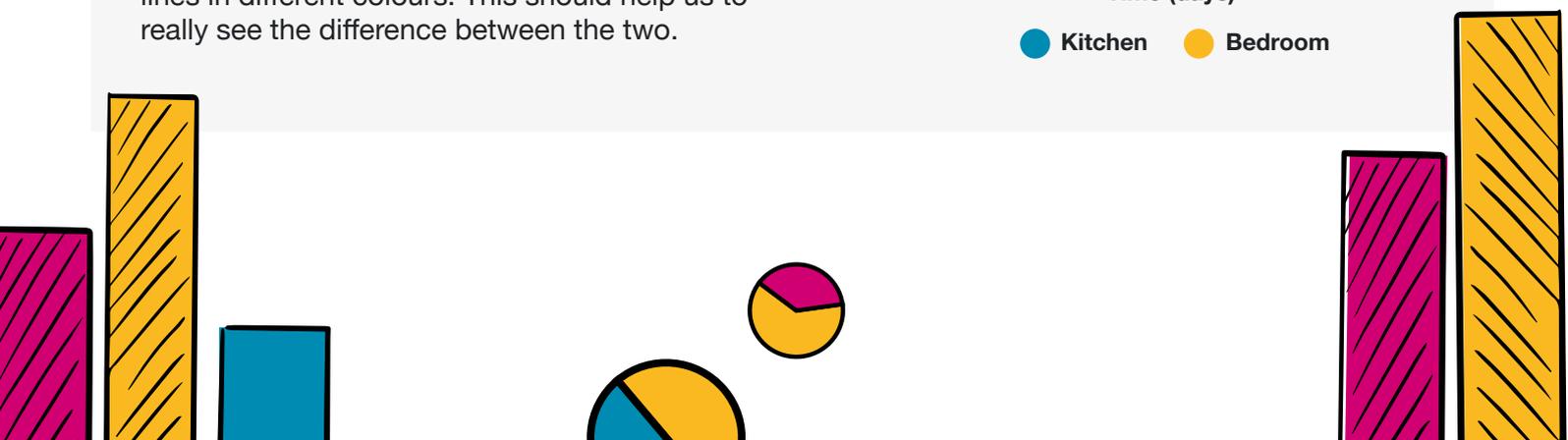
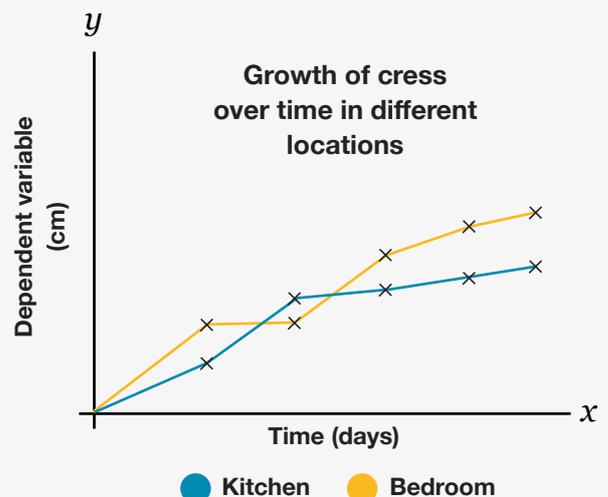
When you're drawing a graph, make sure you:

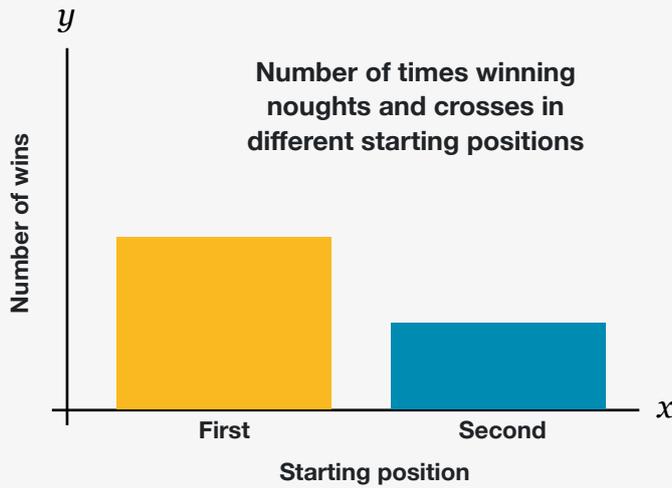
- Put your independent variables on the X axis - there are the ones you change in your research.
- Put your dependent variables on the Y axis - these are the ones you collect in your research.
- Label your axes and use units (centimetres, minutes) if you need them.
- Give your graph a title!

Line/time-series graph

Line graphs are handy to help look at the relationship between your independent and dependent variables if they're both numerical (measured in numbers). They're especially useful if you're measuring something over time.

This would be most useful for our Science example, where we want to plot height (dependent variable - y axis) over time (independent variable - x axis). Because we're measuring more than one plant, we can plot two lines in different colours! This should help us to really see the difference between the two.





Bar graph

Bar graphs are valuable for comparing different groups in your experiment, especially if you have an independent variable which isn't numerical.

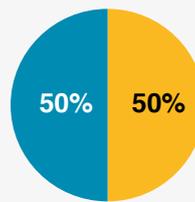
A bar graph would work well for our Maths example, with one bar showing the number of wins when you start first, and another bar showing the number of wins when you start second.

Pie chart

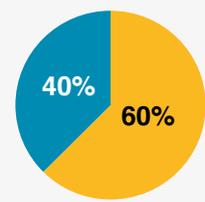
Pie charts are helpful for visualising percentages. Don't forget that the whole pie needs to add up to 100%!

A pie chart would be really useful for our English example, because we can turn the results into percentages. Creating a pie chart of the proportions of girls and boys in the world and putting it next to a pie chart of boys and girls in the books would show us if there was a clear difference.

Boys and girls in the UK

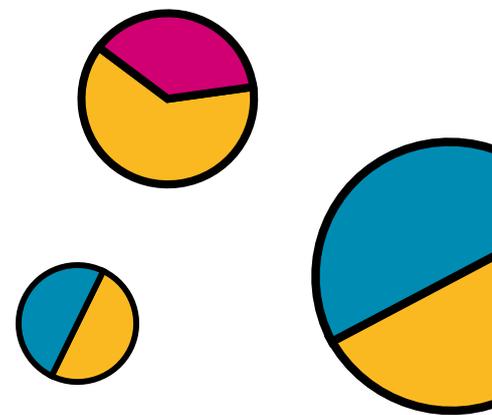


Boys and girls in my books



Boys

Girls



SHARE YOUR RESEARCH

One of the most important skills for a researcher is being able to communicate your results with other people. For everybody to benefit from your research, they need to know about it!

There are lots of different ways you can share your research with others. You could make

- **A Poster**
- **A Video**
- **A Presentation**

Most researchers will make a combination of different types to try to reach as many people as possible. Pick your favourite method and create your own way of sharing your research!

Whatever type of communication you chose, make sure you include all of the following bits of information:

Title

What was your question?

Abstract

A short summary of your research.

Hypothesis

Tell us what you predicted the answer would be.

Background research

What extra questions did you ask? Write about what you found out!

Materials

List all the equipment you needed to complete the research.

Experimental methods

Write out your plan you made in order to complete the research.

Results

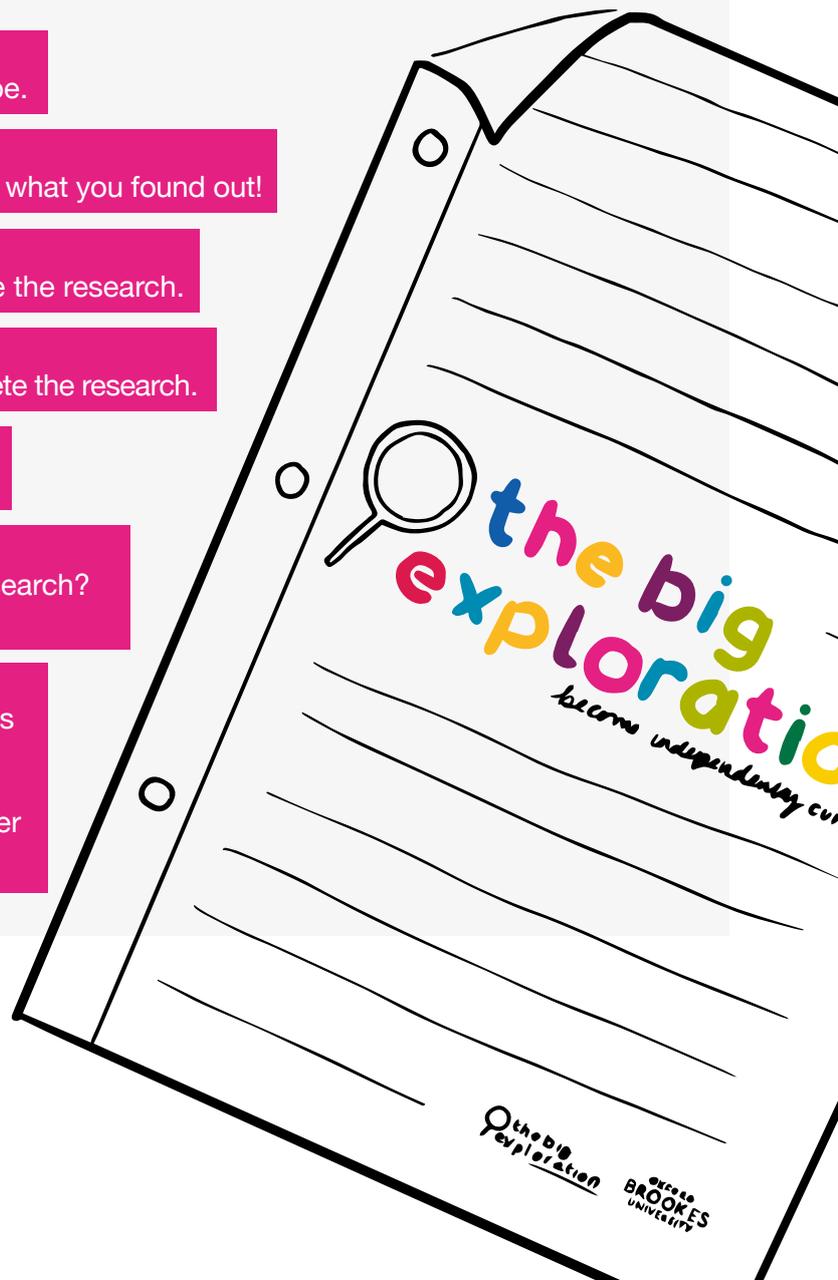
Make sure you include any graphs you made!

Photos

Do you have any photos of you doing your research?
It might be useful to include them!

Conclusion

Tell us what your research has shown you! Was your hypothesis correct? Would you change anything if you had to do the research again? Do you want to find out more? How could other people use your research?



**We can't wait to see what you come up with!
Don't forget to send your research to us at
bigexploration@brookes.ac.uk.**