

Get Ready for A level Statistics

Here are some suggestions to practice the most important maths skills needed for the Stats A level course, as well as some ideas and links for general interest around the subject. Try to do a little each week – and please make sure that you complete the separate summer preparation booklet to hand in at the start of the course.

Skills Practice:

There are some critically important skills that you'll need in Statistics A level – use any of the websites below to practice questions on **percentages, averages, stats diagrams & probability**.

BBC Bitesize <https://www.bbc.co.uk/bitesize/levels/z98jmp3>

Doctor Frost Maths <https://www.dr frostmaths.com/>

Seneca Learning <https://www.senecalearning.com/blog/gcse-maths-revision/>

'The Joy of Stats' presented by Professor Hans Rosling

<https://www.open.edu/openlearn/whats-on/tv/the-joy-stats> Click this link to watch any/all of the following six clips for examples of how statistics is used in many different areas.

Why you might go up a hill, but come down a crime victim

Plotting San Francisco's crimes onto a topographical map revealed a surprising factor in crime rates.

200 countries, 200 years, 4 minutes

Using animated data visualisation, Hans Rosling takes us through 200 years of global development.

Above Average

How many legs does the average Swede have? The surprising answer can tell us a lot about averages.

The Lady with a Data Visualisation

Famous for her lamp, it was the light shed by Florence Nightingale's statistics that really saved lives in great numbers.

Meaningless and Meaningful Correlations

Just because two things might appear to be related, it doesn't mean they are - but it's the meaningful correlations that are important.

How statistics makes understanding foreign words easier

Through a massive statistical analysis, Google have taught a machine to translate across dozens of languages pretty accurately.

TED Talks (Technology, Entertainment, Design: Ideas worth Spreading)

Here are two examples from TED talks – but there's a huge collection to browse through if you want to explore further.

https://www.ted.com/talks/mark_liddell_how_statistics_can_be_misleading

Statistics are persuasive. So much so that people, organizations, and whole countries base some of their most important decisions on organized data. But any set of statistics might have something lurking inside it that can turn the results completely upside down. Mark Liddell investigates Simpson's paradox.

<https://www.youtube.com/watch?v=8B271L3NtAw> *The danger of mixing up causality and correlation.*