

Teaching statistics topics

Some of the statistical content of AS/A level Mathematics is not easy to place in one particular Topic Plan. We have therefore designed this opening document to provide details of useful, cross-topic resources. The [AS/A level Mathematics Subject Content document \(DfE, 2016\)](#) describes how students must be able to use data in statistics:

- Students must become familiar with one or more specific large data set(s) in advance of the final assessment (these data must be real and sufficiently rich to enable the concepts and skills of data presentation and interpretation in the specification to be explored).
- Students must use technology such as spreadsheets or specialist statistical packages to explore the data set(s).
- Students must interpret real data presented in summary or graphical form.
- Students must use data to investigate questions arising in real contexts.

Free Integral resources

- Registering your school with the AMSP is **free** and gives you a teacher account to [Integral](#) to enable you to access extensive resources to support your teaching and learning, including materials for statistics.
- Full details can be found here: [Register with the AMSP](#).

Promoting statistical thinking

- [What's going on in this graph?](#) A Desmos collection based on [The New York Times feature](#).
- [Quibans](#): Questions inspired by a news story.
- [Skew the script](#): US aligned resources but based on real life data.
- [British Social attitudes](#): Survey results
- [Baby names explorer](#): Shows top 100 names for each year – just some fun!

Large data sets (LDS)

- Each specification has its own data set.
- A collection of resources designed to help teachers work with the LDS: <https://mei.org.uk/large-data-sets> It includes links to each LDS.
- [Ideas for LDS investigations](#): Ideas to give students experience of working with real data
- The free [Integral](#) resources contain lessons based on the LDS including teacher notes, PowerPoint presentations, student worksheets and solutions.
- The [Office of National Statistics](#) (ONS) has a wealth of data sets including [ONS Time series tool](#).
- [Nomis](#) is a service provided by the ONS focussed on labour-market statistics.

Miscellaneous

- [Information Is Beautiful](#) & [LuminoCity3d](#): Infographics about interesting statistics.
- [Significance Magazine](#) consists of articles 'written by statisticians for anyone with an interest in the analysis and interpretation of data'.
- [Winton Centre](#): An interesting website about risk and evidence communication.
- ['What can education learn from real-world communication of risk and uncertainty?' \(Spiegelhalter & Gage, 2015\)](#): An article about teaching probability to younger students.